

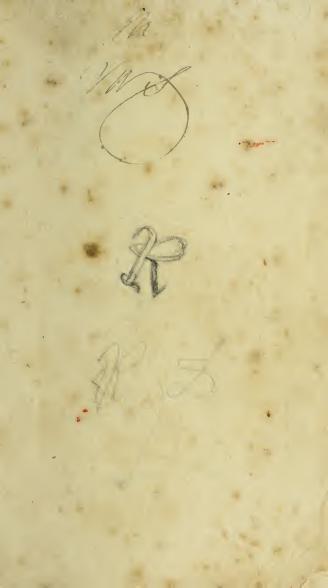
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EXEMPLIFYING

1888

THE EXTRAORDINARY SAGACITY

OF VARIOUS SPECIES OF

THE ANIMAL CREATION.

With various living creatures, and the air Replenish'd, and all these at thy command, To come and play before thee? Know'st thou not Their language and their ways? They also know, And reason not contemptibly.

MILTON.

By PRISCILLA WAKEFIELD.

THE LIBRARY OF THE

SECOND EDITION.

JUN 24 1933

UNIVERSITY OF ILLINOIS

PRINTED FOR DARTON, HARVEY, AND DARTON, No. 55, Gracchurch-Street.

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To my Grandsons,

EDWARD GIBBON WAKEFIELD.

AND

BARCLAY HEAD.

THE LIBRARY OF THE

MY DEAR BOYS,

Eren din Wester

UNIVERSITY OF ILLINDIS

as a mark of my tender affection, and earnest solicitude to form your taste to every thing that leads to virtue and goodness. The attributes of the Deity are displayed in his works, which surround us in every part of the habitable globe; and the deficiency will be ours if we neglect the opportunities of reading in this volume of natural religion, which lies open to all mankind, and is written in a universal language. All may observe, and those who

A

do.

do, must perceive the existence of a Great Creator, from the consummate wisdom and goodness that is apparent in his designs. Accustom yourselves to see every thing with an accurate eye, and reflect upon what you see; and in the course of a few years you will lay up a fund of knowledge, that will be a treasure in more advanced years, when your time will be engrossed by the necessary occupations of life.

With the warmest wishes for your welfare and happiness,

I am,

Your affectionate grandmother,

PRISCILLA WAKEFIELD:

Tottenham:

PREFACE.

THE distinctions between reason and instinct are difficult to ascertain: to define their exact limits has exercised the ingenuity of the most profound philosophers, hitherto without success. Nor can the learned agree as to the nature of that wonderful quality, that guides every creature to take the best means of procuring its own enjoyment, and of preserving its species by the most admirable care of its progeny. Some degrade this hidden impulse to a mere mechanical operation; whilst others exalt it to a level with reason, that proud prerogative

of man. There are, indeed, innumerable gradations of intelligence, as of the other qualities with which the animal kingdom is endowed, in like manner as the different orders of beings approach each other so closely, and are so curiously united by links, partaking of the nature of those above and those below, that it requires a discerning eye to know what rank to assign them. Thus, quadrupeds and birds are assimilated to each other by the bat; the inhabitants of the waters to those of the land, by amphibious animals; animals to vegetables, by the leaf insect, and by plants that appear to have sensation; and animate to inanimate, by the oyster, the moluscæ, and sea anemones.

Reason and instinct have obvious differences; ferences; yet the most intelligent animals, in some of their actions, approach so near to reason, that it is really surprising how small the distinction is. The great and most striking superiority of reason seems to consist in these two points: the capacity of knowing and acknowledging our Creator, and of rendering its owner responsible for his conduct. Without investigating further the metaphysical distinctions of reason and instinct, to which I am quite incompetent, I will proceed to make some apology for the following work.

The harmonious beauty of creation, and the interesting objects it presents, have been my delight from childhood; and the enjoyments, as well as the advantages, I have received from this taste,

10 ×

have made me desirous of communicating it to others, by relating a few wellauthenticated facts of the exact coincidence of the instinctive powers with the necessities of the animal. My friends, aware of my intention, increased the stock of my materials by several curious communications, which I thought more likely to arrest the attention of the young, when combined in the form of letters, than a long string of detached anecdotes, following each other like horses in a team.

My motive has been to excite attention to the propensities of animals, as a powerful antidote to treating them with cruelty or neglect, so often practised by the ignorant and thoughtless from inconsideration. Who can observe, without admiring

admiring them! Who can admire, without adoring that Power that has so eminently displayed his wisdom and goodness, in the endowments of every inhabitant of this globe, from man to the most minute insect that our microscopes discover!-each created for a certain portion of enjoyment, adapted to its nature; with organs and dispositions so exactly fitted to procure this peculiar enjoyment, that none can doubt its being the work of an all-powerful, infinitely wise, and benevolent Being.

Conscious of inability to do justice to so noble a subject, I trust that my good intention will be received with the same indulgence as has been so often manifested on former occasions; and if by this small collection of instances of animal animal sagacity, I have added a book of entertainment to the common stock, that neither corrupts the minds, nor vitiates the taste of the rising generation, my endeavours will be well rewarded.

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INSTINCT DISPLAYED.

LETTER I.

FROM CAROLINE TO EMILY.

DEAR EMILY,

To-morrow is my birth-day, when I shall be eighteen. A large party was invited to celebrate the day, and great preparations were made for the occasion: the drawing-room in my guardian's house, was to be decorated with festoons of natural flowers, illuminated with coloured lamps; music was ordered, that my juvenile visitors might be entertained with a dance; and I thought of nothing but pleasure. Little aware of the uncertainty of the future, I was ill-qualified to bear the disappointments that have followed these prospects of joy.

Mr. Campbell, whom I have regarded as a father ever since I can remember, and in whose hands my whole fortune was placed, has made some unfortunate bargains in the Alley, by which he is ruined; and I am obliged to depend for subsistence on the bounty of my mother's sister,

who

who resides with her daughter, on a small income, in a retired part of Wales.

Educated as I have been, in a fashionable manner, and accustomed to the gaieties of London, how shall I bear the uniform secluded life that my good aunt and cousin lead in the country? Since I left school, my time has been at my own disposal: the mornings have generally been devoted to shopping with young ladies of my acquaintance, a promenade in the park, or some other similar amusement: my afternoons have always passed in company at home, or parties abroad. The few intervals of leisure that I could command from these daily engagements, were spent at the piano-forte, or in reading books of entertainment. What an insufferable change must I endure, to be confined to the society of two persons, both strangers to those pursuits that I have been accustomed to consider as the prime enjoyments of life: to be banished from London, and obliged to pass my existence in a country village, where the sound of a coach is seldom heard! To-morrow, instead of my birth-day festival, I depart from the gay metropolis in a stage coach; and, if I reach the place of my destination in safety, I will give you an account of my reception, and tell you with what composure I bear the new mode of life I am compelled to embrace.

Whatever

Whatever misfortunes befal me, I flatter myself, my Emily, I shall still retain the same place in your affections, that I have enjoyed ever since we were placed together at the same school; and though capricious Fortune frowns on me, whilst she continues to smile graciously on you, that your friendship will be undiminished towards your unhappy

CAROLINE.

LETTER II.

FROM THE SAME TO THE SAME.

MY DEAR EMILY,

THE uneasy motion of the coach, and my depression of spirits, rendered my first day's journey inexpressibly fatiguing: at night, weary as I was, I had no maid to assist me in undressing. I then felt, for the first time, that a fine lady is a very helpless being; and I comforted myself with the reflection, that necessity would at least teach me to wait upon myself. Notwithstanding the novelty of my situation, in an inn, and amongst strangers, I slept soundly, and arose more capable of attending to the civilities of my fellow-travellers, than the day before. For, believe me, Emily, the kindness of these people, whom, a few days before, I should have regarded with false pride, as my inferiors, was a great consolation to me in my forlorn situation. In the evening I arrived at my aunt's, rejoiced to feel myself under the protection of one who owned me for a relation. My cousin met me at the door with a most engaging welcome. She is about two years older than I am. Her face is not regularly handsome, but an inexpressible sweetness is spread over every

every feature: her mouth, especially, has the most gracious smile you can imagine. The first glance assured me that I should not be miserable with such a companion. She introduced me to my aunt, who was sitting in a parlour neatly furnished with white dimity, that overlooked a delightful view of an extensive country. She rose to receive me, and, with the tender salute of a mother, bid me consider her house as my future home. The thoughts of dependance brought tears from my eyes: I could only stammer out my thanks in broken accents. She seemed to perceive the cause of my tears, but, without making any remark, changed the conversation to the occurrences of my journey, and united with her daughter in every kind attention that could have been paid to the most respected visitor, rather than a poor dependant relation, who sought an asylum from their bounty. My aunt is about fifty, and has been extremely handsome: benignity and intelligence are marked in her countenance, and a certain dignity of manner, that impresses respect mingled with love. Two such persons I did not expect to find in a Welsh cottage; for the house deserves no better title, though it has every convenience the wants of the family require. I have a chamber to myself, and view from my window a prospect that might supply Salvator Rosa with

with a subject: a mountain of sublime height rises before it, partially clothed with trees of varied beauty; through the midst of them rushes a cascade, which, after rain, swells to a cataract, dashing its silvery foam against the craggy rocks. The house is white on the outside, and stands in the midst of a garden, which my aunt and cousin cultivate with their own hands. The country around is beautiful and romantic: the walks are really charming, and, to me, full of novelty. The first few days I seemed stupid, and passed my time without employment. My aunt, who made allowance for my former habits, as well as my awkwardness in those occupations that fill every hour of their time, asked me, one morning, if I should not like to have something to do; and added, that the best cure for melancholy, was a succession of agreeable business. She then requested me to gather some flowers, and new dress the bouquets that adorn the chimney-piece. After many trials, before I could arrange them to my own satisfaction, I finished them, as my aunt and cousin kindly told me, with some taste. Finding me pleased with my task, she has since given me others, which, though very different from town amusements, are not without interest. You would smile to see me equipped in a printed apron, and a basket of corn on my arm, as soon as breakfast

breakfast is over, to accompany Rachel to the poultry-yard, where we are presently surrounded by a numerous tribe of the feathered race, who divert me extremely with their rivalships, their quarrels, and, above all, with the tender care of the hens for their young broods. The moment we enter, all is bustle and noise; each eager to push through the crowd, in order to pick up the first grain that falls from my basket. The king of our yard is remarkably beautiful: I cannot describe him better than in the words of Dryden:

"High was his comb, and coral red withal, In dents embattled like a castle wall; His bill was raven black, and shone like jet; Blue were his lege, and orient were his feet; White were his nails, like silver to behold: His body glitt'ring like the burnish'd gold."

This handsome bird struts about with an air of majesty, attended by the females, who are also very pretty; for Rachel is attentive to bring up those which are the beauties of the brood. To give you the history of one of our days, I should begin with the morning. I rise at six, three or four hours before my accustomed time: this gives me a day before you are awake, and my health is already improved by it. You would be surprised to see how rosy I am grown.

As soon as we are dressed, we all assemble in the common parlour, to hear Mrs. Saville read a chapter in the Bible, which she has begun on my account, as I had only read scattered passages at school. Could you be present at our morning orisons, you would be charmed with the impressive manner in which my dear aunt reads the sacred volume. I never heard any thing so solemn before. Sarah, an old servant, who has lived many years in the family, and has faithfully adhered to her mistress through all the vicissitudes she has undergone, always attends; besides a young girl, named Fanny, that my aunt has taken from a neighbouring cot, to assist Sarah in the laborious part of the work. At first, I was astonished to see the servants take their seats amongst us; but my aunt, without appearing to condemn my foolish pride, convinced me, that the salvation of the meanest of mankind, is as important in the sight of the Universal Father, as that of the most powerful monarch; and that heads of families are bound to use their utmost endeavours to afford religious instruction to every branch of their household.

When reading is finished, we walk in the garden whilst breakfast is made ready. This sweet enclosure reminds me of the hanging gardens of Babylon; for it is partly formed on

the side of a hill, and the walks wind up the ascent, forming terraces one above another: the uppermost shaded with a row of tall trees. On one side is a grove, with underwood of nut trees; and at the bottom glides a clear stream, in which we often watch the gambols of the fishes, for our amusement. Choice flowers, of various kinds, are cultivated with great care; for both my companions are skilful florists, as well as botanists. One part, concealed by a shrubbery, contains all kinds of useful vegetables, and simples for medicines, which Mrs. Saville dispenses to the poor; for she is their doctress, their counsellor, and their friend. Did you know how she is reverenced and beloved, you would not think me quite so much to be pitied. An hour or two is devoted to gardening, by Rachel and myself; (for I am learning to be useful;) whilst my aunt overlooks her family concerns, and attends to the applications of the poor. I have not vet discovered the secret of her management, for, with a very limited income, she has always the means of relief for the truly distressed. But more of this hereafter.

When our business is finished, we sit down to useful needlework, whilst one of us reads some instructive book to the rest. The most hand-

some piece of furniture in Mrs. Saville's house, is a large mahogany book-case, well supplied with a select collection of books in most sciences. This she calls her treasure, and says it is the only fragment she has saved from the wreck of her early fortunes. In her husband's life-time, she was accustomed to all the indulgencies of affluence; but Mr. Saville having lived to the utmost verge of his income, and his estate being entailed, it went to a male heir, and, consequently, very little remained for her.

We dine early, and the afternoons are often passed in drawing; an art in which Rachel excels, particularly in taking views from nature. Sometimes we converse or walk; and, they tell me, they occasionally pass an hour or two at the parsonage-house. But I have not yet seen either Mr. Palmer or his wife, as they are gone on a short excursion to the sea. We close the day as we began it, with the Bible, and retire to rest before the London fashionables have finished their dinner.

However Gothic this mode of living may appear to you, I begin to think it is rather more reasonable than that into which I was cast at Mr. Campbell's. Time is requisite to reconcile the mind to new views, and regret will sometimes force itself on my mind, at the recollection

that I was so lately, the gay, modish, and admired Caroline Greville; and that now, I am an obscure, dependant, country girl. The thought would overwhelm me, did not the example of Mrs. Saville convince me, that it is possible to endure such a metamorphosis and be happy. Adieu. You shall soon hear again from

CAROLINE.

LETTER III.

FROM THE SAME TO THE SAME.

So, my dear girl, all my acquaintance pity me, and wonder how I exist. You may tell them, that I begin to like my new manner of living, and believe, when I am more accustomed to it, I shall become quite fond of it. My time never passed so quickly; for I am always employed. If I happened to be alone when I lived in London, how tedious the hours seemed; because, without an engagement, I had no pursuit. Now the case is widely different: every occupation is interesting. Do not suppose that there is no variety: Mrs. Saville's conversation alone is a fund of amusement and instruction. She has seen a great deal of the world, mixed much in society, has studied mankind, and enriched her mind with reading. She possesses the uncommon art of correcting the faults of those she is with, so agreeably, that she wins their love, whilst she obliquely reproves them.

By leading me to a succession of employments, she has almost cured me of that slothful habit of lounging away time in doing nothing, or some trifle equivalent to it.—" Chase away your chagrin, Caroline," says she, seeing me look thoughtful, "by pursoits that enlarge your understanding,

derstanding, and improve your heart. Come with me, my love; you shall assist me in teaching twenty little girls their duty, in a school that I have established at a short distance. Their good dame, to whom I pay a small stipend, instructs them in reading and working; but I take upon myself to explain the importance of religion and virtue, the necessity of governing the temper, and the advantages of order and good habits. The little prattlers all love me: and I seldom pass an hour more pleasantly, than in beholding the improvement of this innocent assembly. I accompanied her to the school, and enjoyed a delight that I had never felt before. I intend to repeat my visits, and have taken particular charge of six of these children. At the sight of their benefactress, love and veneration were spread on every countenance, and each seemed eager to obtain a smile of approbation.

Sometimes our table is covered with maps of different countries, and my aunt elucidates the climate, produce, and character, of the inhabitants of each.

Her favourite study is Natural History, in which she is assisted by Mr. Palmer, who has a very extensive knowledge on the subject. They wish to initiate me, but I am such a novice, that I fear they will have a great deal of trouble.

· However,

However, I am desirous of turning my attention that way, from the pleasure I perceive every object affords to my aunt and cousin: (for Rachel, too, is a naturalist:) the most insignificant flower or insect is to them a subject of admiration. They glean from this source many enjoyments to which I am a stranger.

Mr. Palmer has engaged us to attend a lecture at his house twice a week; the substance of which I am to write down, and shall send to you, if you have time or patience to read them.

Thus does this enlightened woman contrive to provide a succession of amusements, in this retired solitude; and so happily do I spend my time, that, except being an incumbrance to Mrs. Saville, I would not resume my former situation, for any consideration. And then, my sweet Rachel, (but you must not be jealous,) she is so affectionate, so amiable, so modest, and such a pattern of filial piety, that I love her entirely, and am fully conscious of my own inferiority. The separation from you is one of my greatest troubles; but I rejoice that this mode of communication still enables me to assure you, that I am, with unalterable regard,

Your

CAROLINE

LETTER

LETTER IV.

FROM THE SAME TO THE SAME.

DEAR EMILY,

Mr. and Mrs. Palmer are a pleasing couple: superior to the flippancy of modish politeness, they are sufficiently refined for the society of any rank, whilst they possess an ease and simplicity that is quite charming. He is the father of his parish. His business is to instruct the ignorant, relieve the distressed, visit the sick, comfort the afflicted, and reform the vicious. When these important and interesting duties give him leisure, the study of nature is his recreation. His wife is young, and pretty: she is a model of domestic management, and is the governess, as well as the mother, of her children. We spent a long afternoon with them yesterday: the conversation turned upon instinct, and since you express an inclination to profit by my studies, I shall give you Mr. Palmer's opinion upon the subject, in the clearest manner I am capable of expressing it.

"The exact limits of instinct," said he, "are difficult to define, as the sagacity of animals often approaches to reason, and appears to outstep that faculty, which forms part of their

nature,

nature, and impels them to certain actions that are essential to their well-being, or that of their offspring. In animals of the same species, instinct is invariably the same, though the individuals that compose it, have never had an opportunity of learning it from example. A Canary-bird hatched in a cage, builds a nest as similar to those formed by Canary-birds in their native woods, as she can with the materials that are given her: yet she has seen none of those of her own species for a model.

"Instinct directs each kind of bird to choose that material, and to adopt that peculiar form, that best suits the constitution and number of her young. This impelling principle guides the eagle to fix her eyry on the summit of a tall tree; whilst the lark, moved by the same irresistible inclination, places her humble dwelling on the Were the feathered tribes led by accidental choice alone, great confusion would ensue. A waterfowl might build in the sandy desert, whilst an ostrich might destroy her future progeny, by laying her eggs on the bank of a river; whereas, under this infallible director, every oviparous animal deposits its offspring in that situation where it is likely to find protection against injuries, and a plentiful supply of food.

"The results of instinct are stable, and exactly adapted to the wants of its owner, as a species, whether

whether beast, bird, fish, or insect; but reason is a yielding quality, governed by circumstances, and accommodating itself to the particular inclination or desires of the individual. Instinct teaches men to shelter themselves from the inclemencies of heat and cold; but reason enables every man to choose a dwelling and situation peculiarly adapted to his own taste and convenience. Reason, consequently, is various: instinct, uniform. The first is the privilege of man, and is the test of an intellectual nature: the latter has something belonging to it almost mechanical, and marks no degree of superiority or merit in the possessor. One bee is as expert, in forming the cell with geometrical exactness, as another. The individuals of a whole species are equally skilful in performing the tasks of instinct: each fulfils his part in perfection, nor do they ever improve or degenerate: the bees of the present day do not excel those in the days of Adam. The same remarks belong to all the various tribes of animals: they rear their young, procure their food, and defend themselves from their enemies, as well as the first of their kind, and no better.

"Here, then," continued he, " is a clear distinction between reason and instinct.

"Let us pursue the comparison.—Reason is progressive; not only from infancy to mature

age, but from one generation to another, as appears by the progress from the savage state to that of a highly civilized nation. In the first periods of society, men only supply the absolute wants of nature; but, as they advance, knowledge, founded on experience, produces the rude beginnings of the sciences: useful discoveries are made, inventions are multiplied, and the comforts of human life augmented. But the arts of animals, if the expression is allowable, are always stationary, and reach at once to perfection. Every individual knows its proper business, without a model or a teacher. Another remarkable difference subsists between reason and instinct: the former is directed by motives, whilst the latter seems to have no other design than the gratification of an irresistible impulse. Men weigh consequences, and act according to their view of the readiest means of producing certain effects: animals perform their instinctive habits without foreseeing the result.

"As an example of this distinction, let us trace the operations of a man going to erect a mill. First he calculates the extent of his means, and whether his finances are adequate to the undertaking. He chooses a proper situation; purchases timber; engages numbers of his fellow-men, skilled in different arts, to assist him: bricklayers, carpenters, and blacksmiths. For each

each he provides proper tools and materials; and when they are set to work, every part is contrived to answer a particular purpose, and is adapted to a determined place. He also takes into consideration the use for which it is designed; whether it is to grind corn, or any other article that may require different machinery: and lastly, whether it is to be set in motion by wind, water, or steam. All this demands reflection, contrivance, design, science, and experience; of which the most sagacious animal that was ever discovered, is wholly incapable. A bird lays the twigs for her nest, and lines it in the same manner, as her ancestors did before her, without these mental operations. Many animals store their provisions, that can have no foreknowledge of the change of seasons. Men sow, reap, and gather in the fruits of the earth, from experience and reason, which teach them the necessity of providing, in the abundance of the one, for the sterility of the other. Men act from motives; animals from their propensities. Reason is more dignified than instinct; but the latter excels reason in the perfection of its operations. The cells of a bee-hive are constructed upon geometrical principles; yet all the cells of every hive, even in different countries and ages, have always been, and still are, of the same shape and proportions. Show me the artist that could

form twenty thousand of these minute cells with such exactness, let his tools be ever so nicely adapted to the purpose.

"The complete operations of instinct are greatly promoted by the admirable conformity of the organs of each animal to its modes of life; which combines with the exquisite perfection of their senses, to enable them to perform their respective tasks, in a manner superior to the most ingenious imitations of men. But some creatures, it must be confessed, display an extraordinary sagacity, particularly when domesticated, adapted to circumstances, and seeming to approach to reason. This is consistent with the order of nature, which is composed of gradations, which are so closely linked together, that it is very difficult to define the limits of the different classes. On some future occasion, I will give you a few instances of this kind; but I have said enough for the present."

I listened with attention to his discourse, and, from the pleasure it afforded me, was desirous to communicate it to you.

I fear I shall be a dull scholar in learning the divisions of the Linnæan system, nor am I quite sure that I shall not grow weary of mere descriptions; therefore, I shall not trouble you with either, especially as you may find them in books of natural history; but I shall only select those

parts of our lectures that relate to the instincts and sagacities of the animal world, believing you will receive the most entertainment from them. My letter is already too long. I conclude, with sincere affection,

Yours,

CAROLINE.

LETTER V.

FROM THE SAME TO THE SAME.

DEAR EMILY,

An ant-hill, in one of our most curious flower-beds, has given us a great deal of trouble; but I do not regret it, because it has been the means of opening a scene of new wonders to my mind. Though Rachel was vexed to see her flowers covered with ants, yet she could not help watching their motions, which drew my attention to them. I was surprised to perceive, that, though they were generally without wings, some of them were furnished with four large ones. Rachel informed me that the winged insects differ in sex from those which have none. and are the parents of the community; that the greater number of them are a kind of neutral insect, that labours for the whole, by building their nests, and taking care of the young; with many other curious particulars, which would almost make one believe that they were endowed with reason, their instincts are so completely fitted to their wants. I passed the chief part of my morning in observing this busy multitude, and was particularly diverted with seeing several of them attack part of a peach that was lying on

the ground. After having satisfied their appetites, they began to endeavour to remove the remainder to their city, but finding it too unwieldy for their powers, they divided it into pieces, and each one trudged off with its load. Soon after, another party seized a beetle, which was likewise a weight above their match: they had recourse to the former expedient of division. They sawed off his limbs, and carried him away in triumph; but not without other difficulties to subdue, for a small ridge intervened between them and their nest, which, like good pioneers, they levelled in one spot, and then proceeded with their treasure.

Rachel, perceiving the interest I took in their movements, proposed entertaining me with an account, selected from the papers of Mr. Smeathman, concerning the termites, an insect that abounds in the tropical climates, the habits of which are very similar to those of the ant, but still more wonderful. I enclose a copy of it for you, since you tell me that my letters have stimulated you to look into the book of nature. I think it must afford you much amusement. I am glad to hear, that, during your retreat in the country, you turn your attention to the same kind of objects that now form my daily recreation, as it gives me some hope that the simple incidents of my rural life will not be wholly uninteresting

uninteresting to you. Rachel desires you will admit her into the circle of your friends, and ventures to unite her love with that of your affectionate

CAROLINE.

SOME ACCOUNT OF THE TERMITES, OR WHITE ANT OF TROPICAL CLIMATES*.

The attention of mankind is almost equally drawn to those creatures that are either particularly useful, and therefore brought under their observation, or so destructive as to render precautions against their ravages necessary. Rapacious beasts are not the only enemies against which men are obliged to contend. Insects of various species, that, from their diminutive size, and apparent insignificance, appear, at first sight, to be incapable of injuring a creature that is endowed with reason, and is justly termed lord of the creation, are, nevertheless, able to cause him much inconvenience. For it has often happened, that the farmer has been disappointed of his harvest; that a nation has been reduced to a scanty portion of food; and other calamities

^{*} The principal part of this account is taken from Mr. Smeathman.

have arisen, from the depredations of insects. Amongst the destructive classes, may be ranged the termites, found in Africa and other warm climates, whose mischievous propensities are exerted in such an extraordinary manner, that no vigilance is a security against their attacks. It seems like a traveller's wonder to say, that a little insect, not larger than an ant, can undermine houses, destroy the supports and the woodwork, make its way through the floors, consume clothes, furniture, books, and every other article that is not made of stone or of metal. If the natives abandon a town composed of wooden houses, these industrious ravagers will clear it away so completly, that, in two or three years. a thick wood arises on the vacant space, and not a vestige of a house remains, unless any of the posts were made of iron-wood.

Some instances of their rapacity may be amusing to those not interested in the consequences; in order, therefore, to give a more exact idea of their operations, I shall relate the following circumstances. An engineer, who had been surveying a district in the Brazils, at going to rest left his trunk on a table, as he supposed in safety; by the morning, he found his clothes and papers so far destroyed, that he was not able to collect a piece of either, so large as a square inch.

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At another time, a party of them discovered a cask of Madeira, and worked so effectually on the staves, as to let out the liquor.

The larger species (for there are several) chiefly make their approaches underground, penetrating beneath the foundation of houses or stores, and rising again, either through the floors, or by entering the bottom of the posts that support the building; when they follow the course of the fibres, and make their way to the top; boring holes and cavities, in different places, as they proceed. Multitudes enter the roof, and intersect it with pipes, or galleries, formed of wet clay; which serve for passages in all directions, and enable them, more readily, to fix their habitation in it. They prefer the softer woods, such as pine and fir, which they hollow out with such nicety, that they leave the surface whole, after having eaten away the inside. A shelf or plank attacked in this manner, looks solid to the eye, when, if weighed, it will not out-balance two sheets of pasteboard of the same dimensions. It sometimes happens that they carry this operation so far, on stakes in the open air, as to render the bark too flexible for their purpose; when they remedy the defect, by plastering the whole stick with a sort of mortar that they make with clay; so that, on being struck, the form vanishes, and the artificial covering falls in fragments on

the ground. In the woods, when a large tree falls from age or accident, they enter it on the side next the ground, and devour at leisure, till little more than the bark is left. But in this case they take no precaution of strengthening the outward defence, but leave it in such a state as to deceive an eye unaccustomed to see trees thus gutted of their insides. It is an extraordinary fact, that when these creatures have formed pipes in the roof of a house, instinct directs them to prevent its fall, which would ensue from their having sapped the posts on which it rests; but, as they gnaw away the wood, they fill up the interstices with clay, tempered to a surprising degree of hardness: so that, when the house is pulled down, these posts are transformed from wood to stone.

We have already seen that it is easier to shut one's door against a fox or a wolf, than to exclude these insiduous enemies. On considering their destructive powers, incalculable numbers, and amazing increase, an enquiry arises in the mind of a casual observer, To what purpose was this insect created? and why was it endowed with instincts that lead it to be so injurious to man? But he who has habituated himself to believe in the infinite goodness of the Father of the Universe, will hesitate, before he presumes that any part of his works is absolutely mischievous or useless. He perceives, that in vari-

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ous other instances, apparent evil is the source of great benefit; whence he concludes, that the same arrangement may prevail in this case; and, on further investigation, he discovers, that in the countries where the termites abound, vegetation is so exceedingly rapid and abundant, and counterbalanced by an equal celerity of destruction, from natural or accidental causes, that, unless some indefatigable agents were provided to clear away every substance tending to decay, these fertile regions would become uninhabitable, from the pollution of the air. In this point of view, this insect is a most valuable creature; and were it possible to annihilate the race, the consequences would be so baneful, as to render their loss a serious calamity. It appears to be an invariable law of nature, that, whatever has reached perfect maturity, should decay, and yield its place to fresh productions. This principle is as observable in the vegetable, as in the animal kingdom: thus, when trees, and even woods, are partly destroyed by tornadoes, or fire, the instincts of many creatures impel them to consume the remainder, or prepare it for a speedy dissolution. None are more expert at this business than the termites; for, in a few weeks, they will divide and carry away the bodies of large trees, and leave a vacant space for a new growth of vegetable produce.

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However troublesome to individuals, therefore, this little creature may be, its general use cannot be doubted. Its depredations on the labours of man may be called accidental, and are the result of its propensities, to promote the good of the whole.

It is time to describe its figure, and the instincts with which it is endowed for the purposes of its own preservation. These creatures have received the name of white ants, from their colour when first hatched, and the similarity of their habits to the common ant; though they greatly excel it in their structures and internal policy.

They live in communities, and build nests different in form, situation, and colour, according to the respective species. Mr. Smeathman, from whom this account is borrowed, has chosen the termes bellicosus, as being the largest and most easily observed, for the object of his particular description. The nests of this species are so numerous, that, in some parts, they are scarcely fifty yards separate, and of such magnitude, that they might be mistaken for a village of the natives. They resemble a sugar-loaf in shape, and rise from ten to twelve feet, perpendicularly, above the ground: the outside shell may be compared to a dome, which encloses, and defends from the injuries of the weather, the interior of the building, which is curiously divided

into apartments for different purposes, that will be better understood, when the changes and habits of the insect are further described. The height of these hills, compared with the size of the architect, is vast, and their strength so great, that the wild bulls, which stand as centinels to the rest of the herd, ruminating on the plain, generally take their place on one of them that is about half built. The commencement of this huge cone is a small turret or two, about a foot in height, and of the sugar-loaf shape; at a little distance, other turrets, of a similar kind, are raised; when, by increasing the number, and augmenting the size, the base of the building is covered with them: the highest and largest remaining in the centre, till, by filling up the intervals between them, they are gradually formed into one large dome. When this is effected, they take away the middle ones entirely, (except the tops, which, united, make the crown of the cupola,) and then apply the same clay to some other purpose.

In each community there are three orders of inhabitants, which are produced from changes similar to those of the silk-worm and several other kinds of insects. The working termites are about a quarter of an inch long, and are far the most numerous, being in the proportion of an hundred to one soldier, which is the denomina-

tion Mr. Smeathman gives to them, after the first transformation: in this state, they assume a different form, and are increased to the bulk of fifteen labourers. The organs of the mouth undergo a remarkable change, evidently adapted to the new office of its owner. Whilst a labourer, a mouth formed for gnawing and taking hold of bodies was necessary, and it was accordingly well suited to that purpose; but when the insect is impelled, by instinct, to guard against the hostile attacks of an enemy, offensive weapons become requisite: it is now furnished with a formidable pair of piercers, or jagged forceps, capable of inflicting a painful wound. These forceps are placed in a strong, horny head, larger than all the rest of the body. The third metamorphosis is still greater: almost every part is altered from its original form, and four brownish, large, transparent wings, appear to enable the perfect termes to seek a convenient spot for a new settlement. The bodies of these are enlarged to the bulk of thirty labourers, and on each side of the head is a large, round eye; but whilst the creature lived underground, no eyes were visible. The greater number of the multitudes of these flies, which emigrate from the parent colony, perish in the course of a few hours, and become the prey of innumerable birds, reptiles, insects, and lastly, of man, as they

are esteemed a nourishing, delicate food, that wants no other cookery than simply roasting before the fire. The few pairs that are so fortunate as to survive the various casualties that assail them, are found by labourers, (termites,) which, at this season, are running continually on the surface of the ground, on the watch for them. As soon as they discover the objects of their search, they begin to protect them from their surrounding enemies, by enclosing them in a small chamber of clay; where they become the parents of a new community, and are distinguished from the other inhabitants of the nest, by the title of king and queen. Instinct is the principle which directs the attention of these labouring insects to the preservation of their race, in the protection of this pair and their offspring. The chamber that forms the rudiment of a new nest, is contrived for their safety; but the entrances to it are too small to admit of their ever leaving it; consequently, the charge of the eggs devolves upon the labourers, who construct nurseries for their reception. These are small, irregularly-shaped chambers, placed, at first, round the apartment of the king and queen, and not exceeding the size of a hazle-nut; but, in nests of long standing, they are of far greater magnitude, and distributed at a greater distance. These receptacles for hatching the young, are

all composed of wooden materials, apparently joined together with gum, and, by way of defence, cased with clay. The chamber that contains the king and queen, is nearly on a level with the surface of the ground; and, as the other apartments are formed from it, it is generally situated at an equal distance from the sides of the nest, and directly beneath its conical point. Those apartments which consist of nurseries and magazines of provisions, form an intricate labyrinth, being separated by small, empty chambers and galleries, which surround them, or afford a communication from one to another. This labyrinth extends on all sides to the outward shells, and reaches up within it, to two-thirds, or more, of its height; leaving an open area above, in the middle, under the dome, which reminds the spectator of the nave of an old cathedral. Around this are raised three or four large arches, which are sometimes two or three feet high, next the front of the area; but diminish as they recede further back, and are lost amidst the innumerable chambers and nurseries behind them. The mechanical skill displayed in the contrivance of these chambers and passages, they being all arched so as to give support to each other, with the form of the hollow dome, adapted to collect a genial warmth for the tender young, which passes to the nurseries, through openings

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suited to the purpose, must be attributed to instinct; for the termites are not endowed with any faculties superior to other insects, if required to act out of that line marked for them by Providence. In constructing their habitations, providing materials, guarding their infant progeny, collecting food, and defending themselves against their enemies, their instincts are admirable, and assume the appearance of order and design; but take one of them away from its fellows, and place it in a situation entirely new to it, it has no judgment to direct its conduct, or to extricate it from its unfortunate lot; therefore, its habits, however wonderful, (and they are truly so, as will be further shown,) are only the irresistible effects of impulse, and performed without a knowledge of the future, or a motive for choosing one mode of building in preference to another.

Great precautions are taken to keep the apartments dry; the area mentioned before forms a roof that is water-proof, and would carry off any water that might accidentally enter the dome, by a communication with some of the large, subterraneous passages that run at the base, in various directions: these are lined with the same kind of clay of which the hill is composed, and ascend the inside of the outward shell in a spiral manner, winding round the whole building.

building, till they reach the top: they intersect each other at different heights, and open either into the dome immediately, or into the interior building. From every part of the large galleries, issue small pipes, or lesser galleries, leading to different parts of the building. Many of these run underground, descending into the earth three or four feet perpendicularly; from whence the labourers collect the finer particles, which, after being worked in their mouths to the consistence of mortar, become that solid clay of which their hills, and all their buildings except the nurseries, are composed. Some of these pipes extend to a vast distance, at least with respect to such minute creatures, being carried out more than an hundred yards from their main city. The large galleries are the great thoroughfares, and are well calculated, by their spiral direction, for that purpose; as the termites have great difficulty in ascending a perpendicular, particularly the soldiers, probably, from the weight and size of their head. If any part of the building happens to be upright, the inconvenience of ascending it is often obviated by a road, made like a flat ledge, directed in the manner of those roads which are cut on the sides of steep hills, to render the passage easier. It is probable, that it is for the same convenience that they build a kind of bridge, of one

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large 'arch, which answers the purpose of a flight of stairs, from the floor of the area, to some opening in one of the columns which support the great arches. This passage shortens the distance exceedingly, to those labourers who have the task of carrying the eggs from the royal chamber to some of the upper nurseries; which, in the largest hills, would be four or five feet in the straightest line, and much more, if carried through all the winding passages which lead through the inner chambers, and apartments.

The king and queen, after once they are immured in their solitary cell, never quit it. The queen, like the queen bee, is the mother of the whole community. In this confinement she undergoes a considerable change; not so much by an alteration of form, as by an increase of size in a particular part. The abdomen, or lower body, stretches out like a bag, enlarging to a vast bulk, compared with the size of the labourers. Smeathman says he has seen this sack above five inches long. These queens are the parents of multitudes of eggs. Some of them have been observed to lay sixty in a minute, which, if uninterrupted, would amount to eighty thousand, in one day of twenty-four hours. Instinct directs the labourers to watch the queen, in order to take away the eggs as soon as they are deposited, and to carry them to the distant cells, where they are hatched, and attended afterwards by these labourers, with the same care as most other creatures bestow upon their own progeny.

It is another peculiar instinct of all the different species, that the working and fighting insects never expose themselves to the open air, without the greatest necessity; but either travel underground, or within such trees and substances as they destroy. If that necessity occurs, they make pipes, of the same composition as their nests, varying the materials according to their kind: one species using red clay, another black clay, and a third a woody substance cemented with gums, as a security from the attacks of their enemies; particularly the common ant, which, being defended by a strong, horny shell, is more than a match for them, and, when they can get at them, rapaciously seize them, and drag them to their nests for food for their young brood. If any accident breaks these pipes, they repair the breach with all speed. Instinct guides them to perform their office in the creation, by mostly confining their attacks to trees that are beginning to decay, or such timber as has been severed from its root for use, and would decay in time. Vigorous, healthy trees do not require to be destroyed,

stroyed, and, accordingly, these consumers have no taste for them.

On opening one of their hills, a general alarm is excited. Some of the fighting insects immediately run to the place, and appear to survey the mischief, though they can only do so by feeling, as it may be remembered that they are blind: their quick motions express terror and rage, and they bite fiercely every thing within reach. By striking their forceps against the nest, they make a ticking kind of noise, which the labourers seem to understand, as they generally reply to it by a hissing. After some time, if all is quiet, the fighters retire into the nest; and the working insects fill up the chasm with fresh mortar, working with great regularity and dispatch. The soldiers have, by this time, disappeared, except here and there one, in the midst of several hundred labourers, who seems to overlook their work, and hasten their operations by a stroke with his forceps, though he never assists them in their labour.

On renewing the attack, the same scene is repeated: but it is remarkable, that each class adheres to its own instincts; for, let the emergency be ever so great, the one order never attempts to fight, or the other to work.

Mr. Smeathman relates, that, as he was one day on a shooting expedition, he perceived a numerous

numerous body of a very large species of termites, that issued out of a hole, and marched rapidly forward, in two parties, chiefly composed of the working insects; though they were attended by soldiers scattered amongst them, as if to keep them in order. During their march. which seems to have continued some time, several of the fighting insects mounted up the plants which overhung the path the troop pursued, and placing themselves on the points of the leaves, which were from ten to fifteen inches above the ground, frequently tapped the leaf with their forceps, which produced a general hiss, and a quicker pace. After watching their progress for more than an hour, they began to descend into the earth, by two or three holes. It is remarkable that this kind were furnished with two conspicuous eyes, and, consequently, fitted for these excursions aboveground.

It is not necessary to point out all the peculiarities of instinct of each distinct species; but it may be curious to observe the varieties of the form and situation of their nests. One kind forms upright cylinders of well-tempered black earth or clay, about three quarters of a yard high, and covered with a roof of the same material, in the shape of a cone, projecting, on all sides, beyond the pillar. After one of these turnets

turrets is finished, it is neither altered nor enlarged; but if the community becomes too numerous for the habitation, the foundation of another turret is laid, within a few inches of the first. These turrets are often increased to the number of five or six, at the foot of the same tree, in the recesses of the woods. Within, they are divided into a vast number of irregular cells, but by no means so varied and artfully disposed as the interior of the hills of the termes bellicosus.

Another species varies both as to the substance and situation of its nests. They are composed of small particles of wood, made into a sort of paste with the gums and juices of trees; and are frequently fixed between the arms of trees; often surrounding the branches, at the height of seventy or eighty feet from the ground; being of a round or oval shape, and of a very large size.

The termites, as has been already said, abound in all tropical countries; but their huge nests are most numerous in places not fully cultivated. As far as relates to their own wants, and the particular office for which they are designed, their instincts are admirable, and afford a striking instance of the exact adaptation of the means to the end.

A more full account of their economy and internal management might have been given; but, it is apprehended, that enough has been shown, to prove that this creature is amply endued with such an instinctive principle of action as enables it to pursue its own interest in the most perfect manner, and to fulfil the destination of its Great Creator.

LETTER VI.

FROM EMILY TO CAROLINE.

MY DEAR CAROLINE,

THE patience you have shown in your misfortunes, and the excellent use of your time in retirement, have made you a great favourite with my father and mother; as they flatter themselves that I shall profit by your example, and, in due time, become a very good girl. I hope so too; but I have a great deal to overcome before I can be half so amiable as you are. You are contented under the greatest disappointments, whilst the most insignificant trifle puts me out of humour. Yesterday I had set my mind upon taking a ride with a pleasant party of young people, but nothing would content my mother, but that I should stay with her at home, to receive an old gentleman, who had engaged to spend the afternoon with her; because he is a philosopher, and your letter on instinct must be shown to him. I submitted with a very ill grace, and was some time before I could recover the serenity of my countenance.

Our visitor made me some amends for my disappointment, by a pretty anecdote* which he

^{*} Rev. John Hall's Travels in Scotland.

related, as a proof that something like sagacity, superior to instinct, on particular occasions, excites animals to deviate from their accustomed habits.

"Whilst I was travelling in Scotland," said he, "as I was one day amusing myself with the objects within my view, on the road between Huntley and Portsoy, I observed two magnies hopping round a gooseberry-bush, in a small garden near a poor-looking house, in a peculiar manner, and flying out and into the bush. I stepped aside to see what they were doing, and found, from the poor man and his wife, that, as there are no trees all around for some miles, these magpies, several succeeding years, had built their nest, and brought up their young, in this bush; and, that foxes, cats, hawks, &c. might not interrupt them, they had barricadoed not only their nest, but had encircled the bush with briars and thorns, in a formidable manner; nay, so completely, that it would have cost even a fox, cunning as he is, some days' labour to get into the nest.

"The materials in the inside of the nest were soft, warm, and comfortable; but all on the outside so rough, so strong and firmly entwined with the bush, that, without a hedge-knife, hatch-bill, or something of the kind, even a man could not, without much pain and trouble,

get at their young; for, from the outside to the inside of the nest, extended as long as my arm.

"They fed the young brood with frogs, mice, worms, or any thing living, within their power to subdue. It once happened that one of the magpies having seized a rat, which it was not able to kill, one of the young ones came out of the nest to its mother and the rat, while they were fighting on the outside of the bush, and assisted her to kill it; which they were not able to accomplish, till the father, arriving with a dead mouse, also lent his aid.

"These magpies had been faithful to one another for several summers, and drove off their young, as well as every one else that attempted to take possession of their nest. This they carefully repaired and fortified in the spring, with strong, rough, prickly sticks, that they sometimes brought to it by uniting their force, one at each end pulling it along, when they were not able to lift it from the ground."

Believing that the whole circle of naturalists at the Parsonage cannot find you such another pair of magpies, I send you the narrative; to which I shall add an instance of the sagacity of the poet Cowper's dog Beau, commemorated in verse by his master.

THE DOG AND THE WATER-LILY.

The noon was shady, and soft airs Swept Ouse's silent tide, When, 'scap'd from literary cares, I wander'd on his side.

My spaniel, prettiest of his race,
And high in pedigree,
(Two nymphs, adorn'd with every grace,
That spaniel found for me,)

Now wanton'd, lost in flags and reeds, Now starting into sight, Pursued the swallow o'er the meads, With scarce a slower flight.

It was the time when Ouse display'd
His lilies newly blown;
Their beauties I intent survey'd,
And one I wish'd my own.

With cane extended, for I sought
To steer it close to land;
But still the prize, though nearly caught,
Escap'd my eager hand.

Beau mark'd my unsuccessful pains, With fixt, considerate face; And puzzling, for his puppy brains To comprehend the case.

But, with a cherup clear and strong,
Dispersing all his dream,
I thence withdrew; and follow'd long
The windings of the stream.

My ramble finish'd, I return'd, Beau trotting far before, The floating wreath again discern'd, And plunging, left the shore.

I saw him with that lily cropp'd,
Impatient swim to meet
My quick approach, and soon he dropp'd
The treasure at my feet.

Charm'd with the sight, the world, I cried; Shall hear of this thy deed; My dog shall mortify the pride Of man's superior breed.

But, chief, myself I will enjoin,
Awake at duty's call,
To show a love as prompt as thine,
To Him who gives me all.

I cannot help thinking that you must lead a humdrum sort of a life, notwithstanding the romantic beauties of your cottage, and your determination to be happy; yet I should like to mount an air-balloon, and take an hour's peep at you and your gentle Rachel, of whom I am half jealous; though I am desirous of sharing her affection with you, my Caroline, provided you promise to reserve the largest half of your heart for

EMILY.

LETTER VII.

FROM CAROLINE TO EMILY.

DEAR EMILY,

Your friend's description of the artful contrivances of those ingenious magpies, would make ample amends for staying at home. The fondness of animals for their young is truly surprising; and when called forth by particular circumstances, seems to give them powers beyond the common limits of their faculties.

A few evenings ago, as I was enjoying a walk with my dear Rachel, she led me through some verdant meadows, covered with the sheep of a neighbouring farmer*. Our path lay within a hundred yards of a clear brook, formed by a small stream that descends from a mountain. Many ewes and lambs were feeding near us, but one in particular drew our attention, by the singularity of its motions. She approached us, bleating very loudly, and, after looking pitifully in my face, ran off towards the brook. At first we regarded her with a careless eye: but, on a repetition of the same actions, bleating still louder, and again running towards the water,

^{*} This anecdote is attested as a fact by Mr. Collet, in the Monthly Magazine for December, 1808.

showing an anxiety for us to follow her, by repeatedly looking behind her till she reached the brook, where she stood still, she excited more notice; and having watched her for some minutes, without being able to account for her behaviour, we continued our walk, and had nearly reached the gate that led into the next field, when she came running after us the third time, and seemed yet more earnest, if possible, than before. We then determined to follow her, in order to discover the cause of her uneasiness. As soon as we turned towards the rivulet, she ran with all her speed, looking frequently behind her. When we reached the brink of the stream, she peeped over the edge of a hillock into the water, looked up in our faces, as if to solicit our commiseration; and bleated with the most significant voice I ever heard from one of those creatures we call dumb. Judge of our surprise, when, on looking over the brink, we perceived her lamb standing close under the hillock, with the water nearly over its back. Rachel ran to the farm-house for help, whilst I staid by the anxious mother, to assure her of our assistance. The lamb was presently rescued from its dangerous situation, when its fond dam began to lick and suckle it; looking up at us. with pleasure, if not gratitude, and expressing her her sensations by several cries, very different from those bleatings she had uttered in her distress.

The delight we felt was little inferior to that of this tender creature, whose maternal solicitude impelled her to a conduct that nearly approached to reason. Indeed, it is extremely difficult to fix the limit where instinct ends, and the reasoning faculty commences: so nearly interwoven are the gradations of being, that the distinctions are scarcely perceptible.

The farmer's wife was also well pleased at saving her lambkin, and entreated us to rest ourselves in her parlour, and partake of a bowl of raspberries and cream. We accepted her hospitable invitation, and were well entertained with her conversation, as she was qualified to give us much interesting information concerning the sheep. "Our old shepherd," said she, "has had long experience in his business: he can readily distinguish, by the cries of the mother, whether a lamb be lost by drowning, falling into a pit, or destroyed by birds or beasts of prey. In the two first cases, she runs about in a frantic, disordered manner, utters a wild sort of cry, comes hastily back, and will look into the hole or pit where it is. If the lamb be carried away, her behaviour is still more disordered: she runs about from one of her neighbour's lambs to another. D

another, and the tremor of her voice shows the perturbation she suffers. Sometimes she expresses her woes in a long, melancholy tone; at other times, her bleat is a wild, inarticulate strain, expressive of her anguish. There are few creatures," continued she, "that defend their young with more warmth, as long as they are able, than the sheep; though, at other times, they are remarkable for the meekness of their spirit. When we put them to their mothers again after weaning, each sheep knows her own lamb, and ever after associates with it."

Upon this, I enquired how it was possible she could know that the lambs were recognised by their mothers; for to me all sheep have the same countenances. "So far from that," replied the farmer's wife, "the shepherds know every sheep of the flock; and my husband remembers an instance of a man being hanged for sheep-stealing, at Bury St. Edmund's, on the oath of the prosecutor, who swore to the countenance of the sheep." We all agreed that we should be sorry to deprive a fellow-creature of life, on a circumstance that appears to us so uncertain; yet it was admitted as sufficient evidence in a court of justice. Rachel remarked, that though the innocent and gentle disposition of the sheep rendered it an amiable animal, she thought it had

but little intelligence or attachment. The farmer's wife said that they were not so deficient in either, as they appeared to those not conversant with them; as she could prove, by two stories she had heard from their shepherd, who was a Scotchman, and had witnessed the facts*.

"No animal," resumed she, "is more attached to that spot of earth on which it was reared, than the sheep. A ewe that was driven from Scotland into Yorkshire, made her escape, and after passing through towns, crossing rivers, &c. revisited her native spot in the hills of Annandale. Another from Perthshire came back to Hundishope, a store-farm nearly twenty-three miles distant from Edinburgh. When she reached Stirling, it was fair-day: she durst not venture through the town amongst the populace, but rested herself at its north-side till the fair dispersed, and came through late in the evening."

Our repast being finished, we thanked our kind hostess for our entertainment, and returned by another path, along the sea-shore, leading over the crag of a projecting rock, which commanded a most glorious view of the setting sun, gradually sinking into the ocean, and tinting the waves with the richest colours. Whilst I

^{*} Repertory of Arts.

was enjoying the extensive prospect, Rachel exclaims: "Observe, beneath, that crowd of fishermen: they seem to have found something curious in the water; let us descend, and see what it is."

We accordingly did so, and found a worm of prodigious length, perhaps more than twenty feet long, and not thicker than a crow-quill. The fishermen said they had seen some of the same species as many yards in length; but we scarcely gave them credit for their assertion. because that kind of people love to deal in wonders. Rachel knew, at the first glimpse, that it was a gordius marinus *; and said that its power of contraction and extension was so great, that it could not be measured: for, that Mr. Palmer had put one of eight feet, alive, into spirits, and it instantly shrunk to one foot, but increased twice its former size in bulk. Whilst we were looking at it, it twisted itself into an indescribable variety of convolutions: sometimes forming a true lover's knot, or twining into the line of beauty; and in its motions frequently described the most graceful swells imaginable. I wanted to give the men a trifle to carry it home; but Rachel said it was scarcely possible to preserve it in its natural

^{*} Transactions of the Linnæan Society.

state; for, if suffered to die in sea-water, one part will decay, whilst the other is alive: and so sensible is this creature to any thing contrary to its nature, that even fresh water occasions an immediate contraction.

Upon our return home, we gave an account of the objects that had excited our attention, when Mrs. Saville, who often contrives to draw moral instruction from trifling circumstances, remarked, that the pleasure of this buge worm seems to consist in its agility, and perpetual change of form, which probably arises from a back-bone of balls and sockets, like the serpent tribe. "This species of enjoyment," said she, is wholly animal; yet it is adapted to the class of existence to which the gordius belongs. The gradations of enjoyment, are as regular as the orders of creatures, or the degrees of intellectual capacity. Man is superior to every other inhabitant of this globe: his rational powers enable him to turn his attention on the objects by which he is surrounded: he can investigate their structure, their habits, and the laws that direct them to pursue their own good: and he alone can refer the arrangement and government of this beautiful world, with all the creatures that dwell on it, to that Great Source of goodness and intelligence that created it."

Rachel

Rachel, with ready recollection, immediately applied those lines of Burns, in confirmation of her mother's assertion—that every creature has its own peculiar happiness.

The partridge loves the fruitful fells;
The plover loves the mountains;
The woodcock haunts the lonely dells;
The soaring heron the fountains:
Thro' lofty groves the ring-dove roves,
The path of men to shun it;
The hazel bush o'erhangs the thrush;
The spreading thorn the linnet.

Thus, ev'ry kind their pleasure find,
The savage and the tender:
Some social join, and leagues combine;
Some solitary wander.

This conversation was scarcely finished, than Rachel, with more earnestness than usual, enquired whether Sarah had taken in her linnets; for she that moment recollected that she had carclessly left them abroad, when she went from home. "They are safe," replied Mrs. Saville, but, my dear girl, you have been on the point of losing them both." Rachel's cheeks flushed deeper red than usual at this intelligence. "You had left Robert at liberty," continued Mrs. Saville, "and by some accident the fasten-

ing of Henry's cage was undone; and just as Fanny was bringing home the cows across the lawn, she perceived him at the cage door, ready to join his friend. She hastened towards him, before he had time to escape."

In order to make this account intelligible, I must tell you the history of Rachel's linnets. They were caught by a nephew of her father's, when a school-boy, who is since dead; and being great favourites with their master, Rachel took them under her protection*. These birds are very remarkable for an attachment to each other, though they have not been brought up together, and are both of the male sex. They have now been kept several years, and their friendship appears to be strengthened by time. The first tokens of their mutual regard were observed in the early part of their acquaintance: when one sang, the other joined it; and at night, each slept on that side of the cage which was nearest his friend. At length their attachment was more fully ascertained, when they were set at liberty whilst their cages were cleaned. One of these affectionate birds took the opportunity of flying to the other's cage, and they were afterwards occasionally indulged with enjoying each

^{*} Dr. Lettsom related these circumstances in the Monthly Magazine.

other's company in the same cage; when they always expressed their high gratification, by fluttering towards each other, joining their bills together, and each gently picking the tongue of his friend by turns. After some time, their young master ventured to allow one of them to fly abroad in the open air, whilst the cage of the other was hung on the outside of the window, as a pledge for the return of his friend. Rachel grants this indulgence sometimes to one, and sometimes to the other. They both appear greatly delighted with the company of the wild linnets, with whom they sport for several hours together; but no temptation can allure them to forsake each other. As soon as the hour of rest approaches, they return to the empty cage, which is placed near the other. Were both allowed to go abroad together, it is not very likely they would ever come home: but so strong is their attachment, that they prefer captivity to separation. Should death divide these fond friends, it is supposed that the survivor would soon die with grief*. They were named Robert and Henry, after two favourite schoolfellows of Rachel's cousin; and, as he valued them highly, she has tended them with great care since his death.

^{*} Which actually happened to Dr. Lettsom's linnets.

If Rachel had not such a particular motive for keeping these birds, they would have been set at liberty long ago; for she disapproves the cruel custom of confining birds in cages.

I hear the summons for dinner, which obliges me to put an abrupt termination to my letter. Adieu.

CAROLINE.

LETTER VIII.

FROM EMILY TO CAROLINE.

MY DEAREST GIRL,

I ADMIRE your friendly linnets, and think they should have been named Damon and Pythias, after the celebrated friends of ancient story. They prove, at least, that birds have affection, if they have not reason. But I can assure you, that they are capable of attachment, not only to their own species, but also to those who feed them, and to the place where they have been sheltered and nourished.

We are apt to consider sparrows as stupid, and regard them with an unfavourable eye, because they cat a little of our corn; but a friend of my mother's related an instance of the sagacity of one she had brought up tame from the nest, that really astonishes me; yet, as she is a person of strict veracity, you may believe it to have happened exactly as she told it*.

This lady lived at Fulham at that time; and when she went, for the winter, to her house in London, which was situated near the Thames, she conveyed the sparrow; having covered his

^{*} This anecdote is related on the authority of Mrs. Powell of Tottenham.

cage, in the carriage. After some months, the window of the drawing-room was one day left open, and, as the bird was suffered to fly tame about the room, it took its flight, and was lost without hope of recovery.

About ten days after this circumstance, she had occasion to send a servant to Fulham, who told the maid left there, of the unfortunate accident of losing the sparrow, and his mistress's concern on the occasion. Upon which she observed, that for a day or two a sparrow had come constantly into the kitchen, and, with unusual familiarity, had placed itself upon the chairs and dressers. It proved to be the sparrow that had escaped from London, and had been a week finding its way to Fulham; as it had taken flight in quite a contrary direction, the window looking towards Northumberland Gardens.

The same bird, the following spring, formed an attachment to a female of his own kind, and made a nest; and, in order to gather materials for it, frequently visited the house, for bits of rag or thread, which he carried away in his beak. Sometimes he brought his wife into the parlour, and once was accompanied by all his little ones; but they were soon alarmed, and flew away. When they were able to take care of themselves, he returned to his kind protectress, and lived in the room as before. This faithful

creature met with an unfortunate end, being accidentally crushed in a window-shutter.

Can your friend Mr. Palmer tell me by what sense this bird was guided to the spot whence he was taken? It could not be sight, for he was conveyed from one place to the other in such a manner that he could not possibly trace his way. It is not likely that the sense of smelling could have retained an influence for so many months. Nor can I devise any known quality with which birds are endowed, that can account for it. You see that, in imitation of you, I am becoming a naturalist; and shall add to your store of curious anecdotes of animals, whenever I meet with any deserving your notice.

You remember that my father is a great sportsman, and is generally accompanied, in his shooting expeditions, by Mr. Craven, a respectable farmer, who is one of his tenants. When they return from the exploits of the day, they generally engross all the conversation with relating their sanguinary achievements, or the hairbreadth escapes of the poor animals, who owed their preservation, probably, more to the bad aim of the marksman, than to the swiftness of their wing. My patience is often exhausted by being obliged to listen to subjects in which I feel so little interest, and which too often savour of cruelty; for I can take no pleasure in the destruction

destruction of the meanest creature that breathes. When we are at Woodlands, Mr. Craven is a frequent guest. Though his manners are not elegant, he is a man of observation and good sense, and has availed himself of the advantages of a country life, to become acquainted with the habits of many animals that live wild around him, as well as those domesticated in his farmyard; and, as he has no reluctance to display his stock of knowledge, when admitted into our circle, I was so fortunate as to give a turn to the history of leaping over five-barred gates, and similar feats of dexterity, by enquiring the means used by the poor victims to elude the pursuit of their enemies. This question led to the modes of defence peculiar to different species of creatures, and the alarm they give to their companions at sight of their natural enemies.

The appearance of a hawk, excites a note expressive of fear in a hen turkey followed by her brood, which is learnt by the young ones, and afterwards applied by them to the same purpose.

A rabbit apprized of danger, will convey the intelligence to her neighbours, by thumping in her burrow with her hinder feet.

Rooks, whilst they feed, are guarded by a watchman, who perches on one of the tallest trees near them, that he may perceive an enemy

at a distance, and expresses alarm at the sight of a man with a gun.

Fieldfares come to this island from Norway, in winter, for the comforts of a milder climate, and the berries in our hedges: they associate in flocks, and, like other birds who live in society, have a guardian to watch over their safety. He is generally placed at the extremity of a bush, rising on his wings; and, if alarmed, gives a peculiar and loud note of terror. The lapwing, who, after warning her young to conceal themselves, by a note intelligible to them, upon the approach of men or dogs towards her nest, appears more terrified than before, in order to deceive those she fears.

Partridges are still more artful: they pretend to limp and scream before their pursuers, till they have withdrawn them from their young.

In other instances, Nature has furnished animals with peculiar weapons of defence. The petrel, which is a bird remarkable for fat, has the singular capacity of squirting oil from its bill, when it has no other means of annoying its enemy.

The voluntary power of electrifying an enemy, is possessed by the gymnotus electricus, in a surprising degree, and is an irresistible defence against those whom it attacks. It is a native of the river Surinam, in South America, and is

said to exceed twenty feet in length. It can kill a man, when irritated. The same faculty enables it to seize its prey, by first benumbing it, and then devouring it before it is recovered. Mr. Hunter has shown, that the organs productive of this wonderful accumulation of electric matter, are so divided by membranes, as to compose a very extensive surface, and are supplied with many pairs of nerves, larger than any other nerves of the body.

The torpedo enjoys a similar power, in a less degree; and some other fishes likewise.

Here is a mode of defence, of a very peculiar kind; a proof, amongst many others, that Nature uses a variety of means to effect the same purpose. The echinus, or sea-hedgehog, is differently armed; with moveable spines, resembling those of the land animal of the same name. Some sea-fish are defended by the protuberances on their shells, which serve them for a fortification. The instincts of the echinus, teach it to foresee tempestuous weather, and it is furnished with the means of resisting its effects. It fastens itself firmly to plants or other substances, at a great depth, by means of tendrils, that resemble the horns of snails. Twelve hundred of these cords have been counted in one animal. When affoat, they are contracted between the bases of their spines.

The sea-blubber, or sea-nettle, would be a most defenceless animal, being little more than a lump of transparent jelly, and very slow in its motions, were it not for a caustic quality, that blisters the flesh of those that touch it, and causes a painful degree of inflammation.

Fear is, no doubt, a great defence to those creatures that owe their safety to flight, though it seems that they often acquire a sense of danger from experience; for M. Bougainville relates, that in the Falkland Islands, the fowls settled on the heads and shoulders of his people, and the quadrupeds ran about their feet. Such a scene would remind one of the garden of Eden.

I have now given you the chief points of information which I drew from my sporting acquaintance, who has wandered far beyond his own sphere; hoping to receive from you further hints on this amusing topic.

The Misses Ormond, who, you may remember, were sometimes admitted into our parties when you were at Mr. Campbell's, are come to pass the summer within a mile of Woodlands, in consequence of a large estate, with a title, coming unexpectedly to their father, through the accidental death of a very distant relation; who, at the early age of twenty-four, was killed by a fall from his horse, in a fox-chase. It is a pleasant walk to Belvoir Lodge, and I have called upon

them frequently, hoping they would be agreeable companions in the retirement of the country; but their former inclination to pride and airs of consequence, are so much increased by this sudden elevation, that I am sometimes inclined to relinquish them, were it not that I have the vanity to hope I may lead them to a degree of improvement, in their tastes and sentiments. The other day, Charlotte, with the most provoking coolness, enquired whether I knew what was become of you. I showed her our correspondence. She smiled, and said you were very romantic; but though she pretended to feel contempt for the obscurity of your present mode of life, she could not deny some praise to the magnanimity you have shown in adversity.

Continue, my dear girl, to instruct me by a recital of your occupations and amusements: you have already wrought a material change in the mind and sentiments of your affectionate friend,

EMILY.

LETTER IX.

FROM CAROLINE TO ENILY.

DEAR EMILY,

Your anecdotes have amused us extremely, and led us to propose the subject of the modes of defence used by animals, as well as the weapons given them for that purpose, to Mr. Palmer, for his next lecture; but, as he requires time to collect matter for our instruction on this curious topic, I shall dismiss that for the present, and relate a remarkable instance of ingenuity, seeming to arise from reflection, in two goats, that happened lately near this place.

On the crag of a high rock, overhanging the sea, are the ruins of an ancient castle, once the seat of feudal grandeur, but now serving only to heighten the romantic wildness of the prospect. One of the bastions remains nearly entire, along which, at a great height, runs a projecting ledge, perhaps a foot wide. A couple of goats, grazing about the ramparts, by some means got down upon the ledge, and one of them advancing till it arrived at an angle, was enabled to turn; but, in its way back, met its companion, which produced a most perplexing dilemma, for it was impossible to pass each other.

Rachel

Rachel and I having wandered near these ruins, in order to gather some wild strawberries, which grow in the neighbouring woods, arrived at this critical moment, and were witnesses of their distress, without being able to assist them. The poor animals were sensible of their unfortunate situation, and uttered the most doleful cries. After anxiously viewing them for some minutes, we ran to some cottages at a little distance, to see if it was possible to discover any means of extricating them. Men, women, and children, led by curiosity, followed us to the spot; but they could only sympathize with the poor animals, without daring to attempt their relief, lest they should be precipitated on the rocks beneath. Many plans were proposed, but all ineffectual. After a considerable time, when hope had almost given place to despair, one of the goats was observed to kneel down, with great caution, and crouch as close as it could lie; which was no sooner done, than the other, with great dexterity, walked over him, and they both returned the way they came, in perfect safety *.

Did not this look like a concerted scheme, between these two goats, to get free from the

^{*} This circumstance actually happened on the ramparts of Plymouth Citadel and is attested by Captain Martin.

terrible apprehension of starving on this precipice? You may believe, that a general joy was felt at the success of their stratagem, and no small surprise at the contrivance. To you, who have probably never seen a goat but in a tame, domestic state, the story may seem improbable; but it would more easily gain credit from an inhabitant of these mountainous regions, who must often have observed the wild goats climb with rapidity and elegant ease, to the highest pinnacle of the most rugged rocks; and when they have attained to a height that seems adapted only to be the resting-place of the towering eagle, frisk about as carelessly as a wanton child would do on a grass-plat, and then look down, without fear, upon the vales below.

No animal more strikingly demonstrates the harmony that prevails between the instincts and inclinations of the inferior classes of creation, and the places destined for their abode, than the goat. Nature has formed it to inhabit wild and uncultivated regions, where nothing grows but a few alpine mosses and lichens, a little wild thyme, or scattered blades of mountain grass: but these are the very food the goat delights to regale upon.

There is another coincidence that is too remarkable to be ascribed to chance: their hoofs are calculated exactly to secure them on the brink

brink of the steepest precipices; they are hollow underneath, with sharp edges, like the inside of a spoon, which prevents them from sliding off the rocky eminences they frequent. A foot that is so nicely adapted to the purpose required, by an animal whose native character leads it to climb amongst rocks and declivities, would have been useless or inconvenient to a creature which grazed on a level. Its disposition, also, accords with the suppleness of its limbs, and the agility of its motions: always restless and active, it walks, stops short, runs, skips, jumps, advances, retreats, exposes itself to view, then hides itself behind a thicket, or flies out of sight; and all without any apparent motive, but the pleasure of changing from one pasture to another. But with so much caprice, they seem to have a tenderness that is amiable; they soon become tame, and will feed out of the hand of those to whom they are attached. Buffon says they will easily suffer themselves to be sucked, even by young children: hence, the fables of heroes nourished by a goat: he adds, that adders, and that strange-looking bird, the goat-sucker, fasten to their teats during the night, and deprive them of their milk.

They are very numerous in this country. Mrs. Saville often makes cheese of goats' milk; and the

flesh of the kid is thought preferable to lamb. The haunches are frequently salted, and used instead of bacon. But I cannot say that I admire the flesh of the old ones, as it has a strong, peculiar taste.

Do not suppose that I lead the life of a recluse: though at so great a distance from the metropolis, we have our festivities. If they are of a different kind from balls and masquerades, they are, at least, full as innocent, and sometimes leave a tranquillity and satisfaction on the mind, that can only be procured from those pleasures that consist more in making others happy, than in present self-gratification. Mrs. Saville, whose principal study is to do good, promotes the welfare and establishment in life, of those girls who have been brought up in her school, after they have left it. If they form a matrimonial connexion that meets her approbation, she either gives them a wedding dinner, or supplies them with some useful article towards housekeeping, according to the circumstances of the bridegroom. You will, perhaps, think this liberality very inconsistent with the narrow fortune to which I formerly told you she was limited; but, by denying herself every superfluous indulgence, she has always something to spare for the wants of others; which she loves to re-

Lieve

lieve in that delicate manner that consults their feelings, as well as their necessities.

Last week, a young woman, who, from the excellence of her conduct, had been one of her favourite scholars, gave her hand to the son of a small farmer in the neighbourhood. As his relations were numerous, and it is customary to invite every branch of the family, and all intimate acquaintance, to assist at the joyful soleninity, it was decided that the feast should be celebrated at the house of the new-married couple, and that Mrs. Saville should only furnish the materials for the dinner, and honour the company, for an hour or two, with her presence, attended by myself and Rachel, who performed the office of bridemaids. Mr. Palmer united the happy pair in the holy bands of wedlock; and afterwards described the festivities of the day, in a sort of doggrel verse, more remarkable for its drollery, than for its poetical excellence; and better adapted to give you a general notion of the hospitality and merriment commonly observed in this country, on these occasions, than an exact account of this particular wedding, where order and moderation were carefully observed.

A WELSH WEDDING *.

A FIRE of square peat, and sufficiently dried,
Was spread on the hearth, and at least four feet wide;
Over which took their station, six kettles or more,
Which promis'd a feast when they open'd their store;
And round this flat furnace, to keep them quite hot,
Were plac'd twelve more vessels, which held,—I know
not what.

Four cooks, in short bed-gowns, attend by desire, Like the witches in Macbeth, to stir up the fire. Forty trenchers, with dull knives, and forks made no brighter.

Were spread on some napkins, that once had been whiter; Supported by planks, forty feet long or more, Completely were rais'd on the grass out of door. But here we are bound the word table to offer. That our verses' great dignity never may suffer. The table prepar'd, and the cooking completed, 'Twas perfectly needful the guests should be seated. Some boards were erected, with order so neat; But they prov'd too hard for a comfortable seat: A number of cushions were instantly made, But not with a needle-no, form'd with a spade. The finest of ling, root and branch, from the common, Par'd off, prov'd a cushion for man and for woman. Now folks, male and female, came in by whole dozens, Of neighbours, acquaintance, of friends, and of cousins. It excited surprise, from a region of rocks, That orderly people should issue by flocks. Black stockings, blue cloaks, and men's hats all admire, Which appear'd to be every female's attire.

[#] Mr. Hutton was the author of these lines.

While many a longing eye glanc'd at the board,
The word dinner sounded—acceptable word!
Five butts of boil'd beef, of a gigantic size,
On the board took their station, with joy and surprise;
On these close attended, as guards rang'd for pleasure,
As many mash'd peas as would heap a strike measure;
With cabbage a pyramid, much like a steeple:
All these were surrounded with thirty-eight people.

The moment arriving when dinner was o'er,
The places were taken by thirty-eight more;
And then a third set, nearly equal to these,
Sat down to the cabbage, the beef, and the peas;
Besides about fifty remaining behind,
Who stuck to the tankard, for none of them din'd.
And now an old dish, open'd wide at each sinner,
As if it would say—" Pay a shilling for dinner."

Eight strike of brown malt, which Caernarvon had seen,

And cost the bride's father, two pounds and fourteen, Was brew'd into drink, that would make one man mad, But given a second, would make his heart glad. The glass going, round—no—the mug, I would say, The lads and the lasses began to look gay; To smile on each other, to toy and to joke: I was an observer, but not a word spoke.

The bard, in a rapture, his harp handled soon, And twang'd with his fingers, to try if in tune; The people selecting and pairing began; Each lass was indulg'd with the choice of her man. Then Amazons, more than like fairies, were seen, Full thirty gay couple to dance on the green. Joy held his firm station till morning was come, When each swain had the pleasure to lead his nymph

home.

We paid a visit to the bride, as soon as we thought she had had time to put her domestic affairs in order, and had the satisfaction to see the good effects of Mrs. Saville's instructions. We found her busily employed with her spinning-wheel at the door, and every part of her dress perfectly neat, though free from any attempt at finery. She appeared much pleased with this mark of notice; and, with a sort of conscious pride, showed us every corner of her house, which might serve as a pattern for others in the same station. Though meanly furnished, every thing was in its place: even the clothes in her drawers were arranged in the neatest manner. Mrs. Saville frequently makes a round of such calls amongst her poor neighbours, that she may know who best deserves her bounty, and in what manner she can most properly relieve their wants. On these occasions, she gives her advice where she sees it necessary; but so kindly does she mix encouragement with reproof, that she renders even that welcome. These visits are considered as proofs of her favour, and every one is eager to obtain them. If she passes a cottage door, the owner is certain of having incurred her displeasure; and so sincerely is she beloved, that few are happy till they have regained her esteem. In all times of difficulty, they apply to her for counsel and help: it would charm you to

see with what condescension and sympathy she listens to their complaints, soothes their sorrows, and leads them, with a gentle hand, from error to the right way.

Though rigidly exact in her own conduct, she is always ready to soften the faults of others; for she often says, had she been exposed to the same temptations, with so few advantages, she might have been guilty of the same; and so far from assuming to herself any praise, she frequently remarks, that much of the applause the best receive, is because their perverse inclinations are not seen.

Can I live with such a woman, and not endeavour, at a humble distance, to imitate her virtues. My misfortunes, as they appear in the eye of the world, have been the greatest blessing that has been bestowed on your happy

CAROLINE.

LETTER X.

FROM THE SAME TO THE SAME.

MY DEAR EMILYS

MR. PALMER came in this morning, after breakfast, to tell us of a remarkable circumstance that had happened in a large room belonging to the parsonage house, which is an ancient building*. A very unpleasant smell had been observed, for some time, in this apartment, for which it was not easy to account, when, having occasion to employ a carpenter, to make a small opening in the wainscot, in order to repair it, out flew such multitudes of bats, as really darkened the place; according to Mr. Palmer's belief, not less than two hundred. It appears that they crept in, through a small crevice between the bricks, on the outside of the wall, and so concealed themselves in the cavity between the wall and the wainscot. How long they had been there is uncertain; but long enough to bring forth and half rear their young, who flew after their parents with that fond attachment that is so striking amongst the various tribes of animals.

^{*} A circumstance, in all respects similar, happened a few years ago, in a very old house at Tottenham High Cross.

Some of them, which were in the act of sucking when they were alarmed, clung to their breasts without letting go their hold*. The windows being open, many escaped; but a great number were buffeted to death by the servants, who were collected together by the cries of astonishment uttered by the carpenter, who was really terrified at such an unusual concourse of living creatures, that proceeded, as if by enchantment, from the wall.

Mr. Palmer brought one of those that had been killed, in his pocket, that we might examine the peculiarities of its structure; especially its wings, which consist of an extremely thin, light, delicate, membrane, that extends from one shoulder, entirely round the body, to the other, and connects the fore and hind legs together. From the delicacy of its texture, and its flexibility, the creature can fold this membrane into a very small compass, when it inclines to rest; but when its wants impel it to take flight, it has, likewise, the power of stretching it out like a sail, to a considerable extent. From the skeleton of this wing, when divested of its covering, it plainly appeared, that the principal bones re-

^{*} I do not vouch that this was observed amongst the bats discovered at Tottenham; but Mr. Bingley mentions it as a habit of the race.—See British Quadrupeds, p.p. 33, 48.

semble so many very long fingers; the fifth, which is much shorter than the rest, may properly be called the thumb, and being armed at the end with a sharp and hooked claw, enables the bat to adhere closely to walls, the clefts of rocks, and such like places, where they remain in a torpid state during the winter, hanging by their claws, with their heads downwards, and their wings wrapped round them, probably for warmth.

Mr. Palmer, perceiving that we were desirous of knowing more of the habits of these curious animals, which partake so largely of the nature of both birds and beasts, related some experiments that had been made with them. A gentlemen * kept one of them for the purpose of examining it more particularly. He offered it a common house-fly when it was asleep, and in order to rouse it, touched its nose with the fly. The bat, sensible that its prey was at hand, made a kind of smack with its mouth, then threw itself suddenly forward by its hind feet, and immediately devoured the insect. A large blue flesh-fly was afterwards presented to it, and was received in the same manner as the former one; but this fly was so large, that the bat was obliged to have recourse to contrivance, to get it

into its mouth. He raised himself somewhat higher than usual, on his fore legs; bent his head, with great dexterity, under his belly; and forced the fly into his mouth, by thrusting it, from side to side, against that part of the membrane which extended between the two hind legs; by which artful means he gained his point, and swallowed his prey without further difficulty.

Spallanzani, a naturalist of great eminence, discovered, that bats, when perfectly blinded, and afterwards set at liberty, had the extraordinary faculty of guiding themselves through the most complicated windings of subterraneous passages, without striking against the walls; and that they avoided, with great nicety, cords, branches of trees, and other obstacles, placed, by design, in their way. He was so much at a loss to conjecture how this was effected, that he attributed it to some unknown sense, bestowed upon this creature for its security. But Mr. Palmer very ingeniously attributes it to an extreme delicacy of feeling in the wing, which presents to the air an enormous surface, in proportion to the size of the animal, and is covered with an exquisitely fine net-work of nerves. He therefore supposes, that, in the action of flight, the air, when struck by this wing, so well adapted to its office, impresses a sensation of heat, cold, or resistance, which directs the bat to

avoid any object that would obstruct its flight; just as you may have seen a blind person perceive a door, or a wall, by the difference of the resistance of the air, without the assistance of touch *.

It is a remarkable propensity of various kinds of animals, to fall asleep in winter, and to remain in a state of torpidity till the spring returns; insensible to pleasure or pain, and preserving their existence without the refreshment of food, partly from not exhausting themselves by action. Mr. Palmer's reply to my enquiries on this interesting subject, so well deserves your attention, that I shall repeat it .- "The wise provision of the Creator, for the comfort of every race of creatures, is so admirably adapted to their wants, and so convincing a proof of his providence, that I am happy," said he, "to seize every opportunity of displaying it to you, my young friends, in its proper point of view. The torpidity of the bat, leads me to say, that the same contrivance prevails, not only amongst many other animals, but is extended also to vegetables. Your own observation must have shown you, that in all those that survive the winter, there is a living principle that resists the strongest frosts: the effect of these only occasion-

ing disease in them, or, if I may apply the term, putting them asleep. Our native trees lose their leaves in winter, whilst their stems remain uninjured. Many of our herbaceous plants lose their stalks, though their roots retain their functions. There are plants still more robust, which, after their roots have been frozen in the ground, the frost having penetrated several feet beneath their ramifications, revive, notwithstanding, at the return of spring. May not this stagnation of the operations of the fluids of these plants, be justly compared with the dormant state of the torpid animals, to which we will now turn our attention, We see," continued he, "the ant fall asleep in a very slight degree of cold; and the common fly does the same, with every appearance of being dead. Nor are these, by numbers, the only insects subject to this lethargic sleep. Quadrupeds have frequently the same propensity. In dormice, marmots, and many other sleepers, life appears to be suspended when cold weather approaches. This suspension of the vital powers, is so complete in some of the species, that their heart ceases to beat for whole months. The snail and the toad undergo the same stupefaction. Several serpents exhibit a phenomenon still more surprising: they can bear to be frozen to so great a degree, as to become brittle, and die if they happen to be broken in this state; but, if they

E 5 be

be left unmolested in their holes, into which the warmth of spring penetrates very gradually, they revive, and give proof that they were not dead. Is it not a striking mark of creative wisdom, that, in all these tribes, this change takes place in the season when their food begins to failwhen the fruit and herbs on which they feed disappear? After having prepared them, by an increase of fat, occasioned by the temporary abundance of summer, and in this fat supplied them with a narcotic to incline them to sleep, as well as food to support them while it lasts; and that, at the same time, that these little devourers are laid asleep, and, from their concealment in their hiding places, they cease to afford prey to the larger devourers, whom they serve for food, these, in their turn, also lose thought and motion. Those that would be deprived of food, by the snow covering that which they feed upon, sleep till the snow melts, and a little longer. Perhaps, for a similar reason, the white bear, which lives by fishing on the sea-shore during the summer, and on the islands of ice in autumn, does not fall asleep till the ice, united, thickened, and raised too high above the water, is no longer the resort of the seal. As the means of subsistence continues longer, a much severer degree of cold is requisite to deaden, in this animal, the appetite for seeking it, than in the black bear, which

is a great devourer of honey and vegetables. Still less cold can the brown bear endure, which lives on animals that winter drives early into their retreats.

"This exact correspondence between the inclination to eat, and a supply of food, cannot be attributed to blind chance or accident, but to the arrangement of an All-wise Intelligence, that has fitted all the parts of the universe to each other; and, in the races of animals now under our notice, has ordered that hunger should cease when famine would take place, as a means of prolonging their existence, and preserving them from starving."

Before Mr. Palmer had put an end to this interesting visit, he told us of an awful catastrophe that had recently occurred, in a mine about twenty miles distant. Several men and boys were obliged to take refuge in a cavity of this subterranean habitation, from a sudden irruption of water, that rushed from some recess of the mine that had been shut up, upon the place where they were at work. The poor wretches remained there three days and nights, with scarcely any prospect of being relieved from their dreadful situation: some of them actually perished of hunger, as the only food they had was a piece of bread, in the pocket of one of the men, who, with the heroic generosity of the most enlightened enlightened philanthropist, at the immediate risk of life, shared his morsel with his unfortunate companions. What a noble act of virtue in a poor untaught mechanic! This sympathy with his fellow-sufferers flowed from the heart, unmixed with the expectation of applause, which so often guides the benevolence of the rich, who spare a little of their abundance, in the hope of receiving an hundred fold; but this poor man shared his all, without a prospect of any other reward in this world, than a conscious satisfaction, arising from doing to others as he would have had them do to him. The survivors were at length extricated from their dangerous confinement*.

We all gladly put our mites into Mr. Palmer's purse, who is making a collection for the widows and children of those who perished; to which he intends to add a reward to this man, for his conduct in this trying moment.

Our guest did not prolong his visit, because he was in haste to accomplish the task he had imposed upon himself, of obtaining a certain sum, to put these poor people in a situation to gain a livelihood.

In works of benevolence, Mr. Palmer is indefatigable: he suffers no amusement or self-gratifi-

^{*} This bappened lately in a coal-mine.

cation, to retard that comfort he has the power to impart; as it is a favourite maxim with him, that a kindness bestowed in the critical moment when it is wanted, is doubly enhanced in value. The example of this good man has greater influence than his sermons. His parishioners love and revere him, and look to him for counsel in difficulty, as to a father.

Believe me, your sincerely attached

CAROLINE.

LETTER XI.

FROM THE SAME TO THE SAME.

MY DEAR EMILY,

MRS. SAVILLE having heard that the children of a sailor, whose wife lives in a small village on the sea-shore, were very ill of the small-pox, proposed a walk, to see whether they were treated properly, and had those comforts that were necessary in their situation. On entering the cottage, we found the mother in great distress: the disorder had risen to an alarming height, and the dear little sufferers were lying on no other bedding than straw. Mrs. Saville expressed her surprise, as she had seen, on former occasions, both a bed and blankets; and enquired the motive for parting with such essential articles of furniture, with a degree of displeasure on her countenance, that showed she suspected that a satisfactory answer could not be given to "Alas! Madam," said the poor her question. woman, "we were obliged to give them to John, in the midst of the sharpest weather last winter. Did you not hear of his being wrecked, and losing all his bedding and clothes? I bless Providence that his precious life was saved by that faithful creature, Pompey. And surely I could

could do no less than give our bed and blankets to my dear husband, who faces the storms of the ocean, to earn a bit of bread for me and my poor babes, whatever we may suffer at home from want of them." Mrs. Saville's displeasure was instantly changed to approbation and sympathy, on hearing this simple tale; and after promising to find relief, she desired to know by what means Pompey was capable of saving the life of his master. "Dear Madam," replied the poor woman, "he did not save my husband's life only, but the whole crew owe their safety to the sense of that dog *. They were deeply laden with corn, and had got only a few leagues out to sea, being in full sail, with a fair wind, when this creature suddenly left the vessel, and jumped into the boat. The crew did not perceive that any thing was the matter; but, astonished at this unaccountable action of the dog, suspected that there must be something wrong. The captain ordered the hatches to be opened, when they discovered that they had started a plank, and that the hold was filling with water. The water gained upon them so fast, that they had no time to save any thing. They all betook themselves to the boat, and my poor man returned home, with nothing but what he carried

^{*} This happened to a corn vessel in the Ipswich river.

on his back. Our loss was very great; but he was alive, and that made all my troubles appear light. He soon after set out on another voyage, and I packed up our only bed, and the blankets belonging to it, and sent them on board for him. Since that, I and my little ones have lain, as you see, upon straw. We have been blessed with health till now; and during the summer we have done pretty well. Before winter comes, I trust that Providence will enable me to lay up money exough to buy a covering to keep us warm." Mrs. Saville encouraged that hope, by promising to add to her store, when she had saved a certain sum, what should be sufficient to complete the purchase. In the present emergency she supplied her with linen, which she keeps to lend to the sick.

On our return home, the conversation turned upon the sagacity of dogs. The multitude of surprising stories, that are well authenticated, of these intelligent animals, would fill volumes, particularly of their attachment to their masters. Rachel has a pretty little spaniel; that, had he the faculty of speech, would have a better title to the appellation of a rational being, than some that walk on two legs. He is accustomed to lie and indulge himself on the lawn behind the house; but the other morning, as he was going to recline on his favourite spot, he perceived that a

heavy dew had made the grass very wet, and having no inclination for so damp a couch, after a moment's reflection he trudged into the hall, and taking the mat in his mouth, carried it to the grass, and then quietly composed himself upon it*.

Mrs. Saville knew a dog that belonged to a shopkeeper, who was in the habit of running into the street, and returning into the house whenever he pleased. On Sundays the house door was shut, and he was obliged to have recourse to a contrivance to gain admittance, which, no doubt, is the effect of imitation. He raised himself on his hind legs, and lifted up the knocker with his mouth, repeating the stroke till the door was opened †.

An old spaniel, that belonged to a brother of Mr. Palmer's, was highly valued for his dexterity in springing woodcocks; and he seemed to take as much pleasure in the sport as his master. At about twelve miles' distance lived a farmer, with whom Mr. H. Palmer used frequently to go on wood-shooting expeditions. If business or disinclination prevented him, for some days, from taking out his dog, this sagacious animal would take the advantage of the first

^{*} This was done by a dog belonging to a particular friend of the author's.

⁺ On the authority of Mr. Edgeworth.

moonlight night to trudge to the farmer's, and lying down at the door, waited the approach of morning. The farmer being glad to avail himself of the abilities of such an excellent dog, generally indulged him with his favourite sport; when, the object of his journey being accomplished, he returned home the following night. And this he repeated so often, that the farmer used to defer his wood-shooting excursions till Gyp paid his visit, being certain that it would not be long before his guest would arrive.

Such instances of sagacity clearly prove, to my mind, that some animals are endued with a capacity that enables them to observe, and to act from reflection: whether it is called reason or instinct is immaterial; the facts are the same, and are incontrovertible. It is evident that there are gradations of the intellectual powers; and, consequently, that some species of creatures are far more intelligent than others. Dogs seem highly favoured in this respect, and to possess more sense than most of their fellow-brutes; but, as they live on such a very familiar footing with man, I think it probable that they owe part of their superiority to that circumstance. In the qualities of the heart they must be allowed to excel; for what creature is so docile, so faithful, so affectionate, or so generous as the dog? He does not show his attachment merely by following his master and protecting his property, but will sacrifice his own life to defend him when attacked. His powers of discrimination are very great; for the same dog that is gentle, tractable, and playful with the family to which he belongs, becomes, on the approach of a stranger, particularly if he is shabbily dressed, bold, courageous, and implacable. No bribe can seduce him from the duty he owes to his benefactor. Our favourite poet, Gay, extols his fidelity, in the character of the shepherd, who, with great simplicity, acknowledges that he has learned many moral virtues from those creatures that are called irrational. He says:

"My dog, the trustiest of his kind, With gratitude inflames my mind: I mark his true, his faithful way, And in my service copy Tray."

To what innumerable purposes are the capacities of this useful race applied. Their instincts enable them to hunt and catch our game, even in the water. They guard our flocks and herds with amazing dexterity. In our rambles, we have frequent opportunities of observing the qualities of the shepherd's dog. Vast flocks of sheep are fed upon the mountains in this country, and the shepherd receives more assistance from one of these dogs, than half a dozen boys could

could give him. It is really curious to see with what expedition he obeys his master's commands: he watches his eye, and is gone to execute his commission at a word, whether it is to drive the flock, with regularity, to their pasture, or to conduct them home at night; and, though other flocks are browsing on the same pastures, he prevents any stranger from intermixing with those under his care. I have seen a shepherd point out to his dog a straggling sheep, on a height more than a mile distant. At the wellknown signal, the dog went off at full speed, and soon returned with the runaway to the flock. They acquire this command over the sheep, merely by their voice; for they are trained too well to their business, to injure their fleecy charge with their teeth.

Dogs that attend drovers have the same qualities. They distinguish accurately the cattle or sheep that belong to the several drovers that follow one another; and will neither suffer one of another flock to enter theirs, nor one of those they guard, to escape.

I need not point out their use in protecting our houses and property from thieves; but one of their valuable properties I must mention, before I conclude their eulogium. I mean that of conducting the blind. How many unfortunate wretches, deprived of sight, friendless and poor, are led from door to door, to solicit a small pitatance from the hand of charity, by a faithful dog, who conducts them with as much care, and probably more certainty, than one of their own species.

I shall finish this long letter by an instance of sagacity and contrivance, in a terrier belonging to Mr. Palmer, that is really surprising. This dog is extremely attached to the horse that draws his master's chaise, and the moment he sees the servant take out the harness, he barks and jumps about for joy. He had been long permitted to accompany the horse whenever they went abroad; but, having become disagreeably clamorous and troublesome at setting off, Mr. Palmer had given orders that Trim should be beaten and prevented from attending them. The dog was much hurt at this treatment; and, after two or three beatings, disappeared at the moment of setting out, though he had been seen in the yard just before. They are in the very frequent habit of calling at Mrs. Saville's, before they proceed to any distance. Trim, determined to avoid the discipline, and yet to enjoy the excursion, came to our cottage, in full expectation that his master would presently follow; but, as he was disappointed, he staid quietly till the next day, and then returned home. A few days ofter, Mr. Palmer set out for another ride. Trim

took a different means to compass his purposes he left the yard, as before, sooner than the chaise; but, instead of proceeding to Mrs. Saville's house, he lay at the corner of a lane, which he knew his master must pass, to get into the high road. The fidelity of Trim, and the ingenuity of his contrivance, have rendered him a great favourite; and, notwithstanding his noisy joy, he is permitted to attend the chaise, which he never fails to do with marks of the highest satisfaction.

Can you forgive me for troubling you with such trifles?—but the uniform tranquillity of our lives does not afford sufficient variety to supply me with anecdotes of a more amusing kind. You must accept my endeavours to please, however deficient I am, and believe me,

With sincere attachment,

Ever yours,
CAROLINE.

LETTER XII.

FROM EMILY TO CAROLINE.

MY DEAR CAROLINE,

CAN you really think that I find no entertainment from the incidents of your rural life? Do you suppose, then, that I am so perverted, that nothing can give me pleasure but striking tales of the vices or the follies of the great? You are very much mistaken. I am tired of the trifling conversation that I so often hear in crowded assemblies; and am still more offended when scandal is called in to supply the want of more reasonable topics. Sorry am I to say, that so far from deriving any advantage from the near neighbourhood of the Misses Ormond, I find them very disagreeable companions. They can talk of nothing but new fashions, public diversions, the rumour of the day, the faults of their aquaintance, or some addition to their establishment, which they have obtained from their father by dint of teasing, in order, as they say, to support his dignity; but, I fear, rather for the indulgence of their own pride, which knows no bounds. Their sudden elevation is looked upon by the world as a most fortunate event; but if the favours of fortune are

to be weighed by the happiness they confer. this alteration in their rank and circumstances must be esteemed rather a misfortune, than otherwise. It has given them such consequential ideas of themselves, that they are ever dissatisfied with the respect that is paid to them; and, instead of feeling contented with their present possessions, they are continually grasping after more, in the hope of forming an alliance with some nobleman of the most illustrious family. As their manners are vulgar, and their minds uncultivated, it is probable that they will be sacrificed to some man whose dissipation has rendered their wealth a desirable object; as I much suspect they will measure the merit of him who claims their favour, by the noble blood that flows in his veins, rather than by his good sense or his virtue. I fear you will think I am running into the very faults I have been condemning; but, my Caroline, to you I unfold my heart, and think I may safely describe the characters of those with whom I am obliged to associate, without the imputation of scandal. I will, however, change my subject for one more congenial to your taste.

The story of your goats proves, beyond doubt, that some animals are capable of reflection; and its probability is confirmed by a similar instance of contrivance in two of the same species, in a different

different part of the world. At Ardinglass, in Red Bay, near Glenarm, in Ireland, two goats happened to be moving towards each other, over a dreadful precipice, on a path so narrow that it was impossible for them to pass each other, and still less practicable for either to turn round: the least attempt to effect the one or the other of these movements would have precipitated them from the rock, which is there four hundred feet perpendicular. In this dilemma, they looked at each other with great seriousness, for a length of time, as if they were deliberating how to extricate themselves from the difficulty; which, at length, they contrived to do, by one of them lying down prostrate, whilst the other walked over his body, each afterwards pursuing his own course with perfect composure *.

The faithful attachment of dogs to their masters, has been too often recorded to require confirmation from any new example; yet I cannot deny myself the pleasure of relating an affecting instance of canine friendship, that happened in France, during the anarchy of the reign of terror.

A few days before the overthrow of Robespierre, a revolutionary tribunal had condemned

^{*} Mr. George Black, brother to the celebrated chemist of Edinburgh, was an eye-witness of this fact.

Mons. R-, an ancient magistrate, and a most estimable man, on the pretence that he had been guilty of conspiracy. Mons. R- had a spaniel, at that time about twelve years old, which had been brought up by him, and had scarcely ever quitted his side. He was thrown into prison. His faithful dog was with him when he was seized, but was not suffered to accompany him into confinement. The dog took refuge with a neighbour of his master, and every day, at the same hour, returned to the door of the prison. Such unwearied fidelity, at length excited the compassion even of the porter, and the dog was allowed to enter. The joy of the master and his dog was mutual. It was found difficult again to separate them; and the jailer, fearful (if the dog should be discovered there) that his governors might consider him as favouring a prisoner, was compelled to carry him out. The animal returned regularly every evening, and was as regularly admitted. On the day appointed for receiving sentence, the dog, in spite of the guards, penetrated into the hall, and crouched between his master's legs. At the execution he was also present, and was, with difficulty, forced from the body. For two nights and a day he remained on the grave. The friend of his master, who had before afforded him an asylum, unhappy at not seeing the

dog

dog as usual, and guessing to what place he had retired, stole forth by night, and finding him at the grave, caressed and brought him back. He tried every means that kindness could devise, to induce him to eat; but, in a short time, the dog escaped, and regained his favourite place. For three months he came every morning to his protector, merely to receive his food, and immediately returned to the grave. At the end of this time nature gave way: he languished, refused to take any nourishment, and died. What friendship could have been more pure, more constant, or more fervent? The hour of adversity did not dismay him; and though he could not fully comprehend the injuries offered to his master, he was jealous that some harm was intended, and guarded him, as far as was possible, with the greatest vigilance. How deep, how lasting were his regrets! His attachment deserved a monument, that should have perpetuated the memory of his master, with the fidelity of the dog, bearing this inscription:

"I loved thee even unto death."

It seems very extraordinary that such an affection should subsist between creatures so different in their natures, their powers, and their inclinations; between whom, one should suppose, there could be no sympathy, or commupose, there could be no sympathy, or commu-

nication of ideas, did we not daily see instances of this strong, marked attachment of the canine race to their masters; and, in different degrees, to every member of his family. May we not attribute this valuable property of the dog, to the goodness of the Great Creator, who has so amply provided for the wants of man in every situation? How many have been saved from drowning, from thieves, and from other dangers, by the sagacity of their dogs? Some time ago I read a paragraph in the newspaper, of the preservation of a man by the means of his dog; and although the names of the persons have escaped my memory, yet the circumstances were related in such an authentic manner, I shall venture to repeat them.

A gentleman's servant in the neighbourhood of Windsor, went out with two horses and a dog, for the sake of exercise. After some hours, the horses came home without either the man or the dog. This caused great alarm to the family: other servants were dispatched different ways in quest of the poor fellow, who was supposed to have met with some unfortunate accident. After a very tedious search, the dog was seen standing in the midst of a turnip-field, with evident marks of distress and uneasiness. On seeing the servants approach, he advanced, and, by every possible sign, indicated his anxiety for

them to follow. He led them, in this manner, into a lane, where, as they saw nothing, they attempted to return; but the dog's importunity was so great, they determined to follow whereever he should lead. He conducted them to the side of a ditch, in which they found the groom in a state of insensibility, having received a fracture of the skull, by a fall from the horse. A proper vehicle was procured, and the unfortunate man was conveyed to his master's house, and placed in a comfortable bed. A surgeon was sent for, and the wound was dressed. During this operation, it was impossible to keep the dog out of the chamber. As soon as all was quiet, this faithful creature placed himself upon the bed; and though the poor sufferer, in the violence of his delirium, often struck the dog, the animal seemed to understand that he was not in his right senses; for neither blows, nor the repulsive voice of his agonized master, could drive him from the post he had chosen. The man recovered, and, no doubt, ever after valued this affectionate creature, to whose attachment he owed his life.

Of all the different kinds of dogs, the Newfoundland seems to possess the most sense, and the strongest attachment. An extraordinary instance of both, Bewick, in his History of Quadrupeds, relates in the following words:

"During a severe storm, in the winter of the year 1789, a ship belonging to Newcastle, was lost near Yarmouth, and a Newfoundland dog alone escaped to shore, bringing in his mouth the captain's pocket-book. He landed amidst a number of people, several of whom, in vain, endeavoured to take it from him. The sagacious animal, as if sensible of the importance of the charge, which, in all probability, was delivered to him by his perishing master, at length leaped fawningly against the breast of a man, who had attracted his notice among the crowd, and delivered the book to him. The dog immediately returned to the place where he had landed, and watched, with great attention, for every thing that came from the wrecked vessel, seizing hold of them, and endeavouring to bring them to land."

I dare say you know that the habits of this breed of dogs lead them to swim and dive; and, it is most likely, that, in a state of nature, their food is fish; for they are known to devour raw trout, and other small fish. Providence has accordingly furnished them with web-feet, which serve them for paddles, and are not bestowed on any kind of dog, but those that frequent the water. How exactly the habits and form of all creatures correspond with one another! Had not you led my attention to the

Book of Nature, I should have overlooked this, and many other beautiful proofs of design, in the creation of the inhabitants of the world.

Farewell, my Caroline: continue to instruct, with your amusing correspondence,

Your affectionate

EMILY.

LETTER XIII.

FROM CAROLINE TO EMILY.

DEAR EMILY,

"Blest be the gracious power who taught mankind To stamp a lasting image of the mind!
Beasts may convey, and tuneful birds may sing
Their mutual feelings in the opening spring;
But man alone has skill and power to send
The heart's warm dictates to the distant friend;
'Tis his alone to please, instruct, advise,
Ages remote, and nations yet to rise."

In these sentiments of gratitude for the invention of letters, I cordially unite with Mr. Crabbe, the author of the lines I have borrowed for the expression of my own feelings upon the subject. What, indeed, would have been my distress, on my first retirement into Wales, if all intercourse with you, my dear Emily, had been impossible; but, by means of this delightful invention, whereever a post can reach, an exchange of sentiments may be enjoyed: -- our joys, our sorrows, may be communicated to the friend of our hearts, though separated by hundreds of miles. Through this medium, you are become acquainted with my revered Mrs. Saville, and my beloved Rachel. You know their characters, you admire their excellencies.

excellencies, and love them for their kindness to me, a stranger, under circumstances that too often deprive us of the regard of old acquaintance, who are more attached to our fortunes and rank in society, than to ourselves. The friendship of my good aunt and cousin, is generally founded on esteem: towards me, at first, it was compassion, and that ardent desire of doing good, that is the principal spring of Mrs. Saville's actions. By this time, I am vain enough to believe, that I have gained a higherplace in their regard, by my sincere endeavours to conform to their inclinations, and, at a humble distance, to imitate their virtues. Cheerfulness is cultivated here, as a duty: every thing that is morose, austere, and gloomy, is banished from this happy cottage. One of Mrs. Saville's first maxims is, to be contented with that lot which Divine Wisdom has chosen for us, and to silence all murmurings and regrets, for the privation of those things that others possess, by remembering how much we enjoy that multitudes have not. Gratitude, she thinks, is the most acceptable part of devotion, and she is almost angry, if she hears any one complain of small inconveniences. She often tells us, that the secret of being happy, is, to be satisfied with the present, and to leave the disposal of the future, with full confidence, to the Supreme Ruler of the universe: for over

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anxiety

anxiety destroys the health, and incapacitates us for duties that require our immediate attention. Every day opens to her a new scene of activity and usefulness; of course, she is never teased with that languor of mind, well known amongst fashionable loungers, by the name of ennui. Her time is divided between acts of benevolence, the cultivation of her mind, and social pleasures. She has found a few select friends, even in this retired situation, that vary and enliven our enjoyments; amongst these, the Palmers are our greatest intimates. We seldom pass a week. without spending an evening together; not in the formal style of visiting, but in that familiar way that gives full scope to conversation. At our last meeting, part of your letter was read aloud, and I am desired to return our general thanks for the amusement it afforded us. Every one of us was affected by the story of Mons. R-, to whom the friendship of a dog must have been a consolation, when all the world had abandoned him. "He must have been a very faithful creature indeed," said Laura Palmer, a most engaging little girl of ten years old, "and I should have grieved when he died. Papa, if you will give me leave, I will repeat a sweet story of a dog, that I read this morning, in the book you lent me." Mr. Palmer nodded approbation, and Laura, with great diffidence, gave

us the following account. "In digging up the ruins of Pompeia and Herculaneum, which were overwhelmed by the lava thrown up in an eruption of Mount Vesuvius, the skeleton of a dog was found, stretched over that of a child ten or twelve years of age. It was conjectured, by those who superintended the workmen, that this dog, from his position, was attempting to save his young master, at the moment of the dreadful catastrophe that destroyed the city. This opinion was confirmed, by the discovery of a collar of curious workmanship, that is preserved in the gallery of the grand duke of Tuscany, upon which was inscribed a history of this dog, in Greek. From the inscription, it appears that this dog, whose name was Delta, belonged to a man called Severinus, whose life he had saved on three different occasions: first, by dragging him out of the sea, when nearly drowned; again, by driving off four robbers, who attacked him unawares; and, the third time, by destroying a she-wolf, which was near tearing Severinus in pieces, on account of his having taken her cubs from her, in a grove sacred to Diana, near Herculaneum. After these exploits, Delta attached himself particularly to the only son of Severinus, followed him whereever he went, and would take no food but what he received from the hand of this child. The circumstances and the inscription, place the existence

existence of the dog out of all doubt; amounting to a proof, that the faithful animal would not forsake his young master; and, when he found it impossible to save him, like a servant of unshaken fidelity, shared his fate."

"After all these fine stories of the generous nature of dogs," said Mrs. Palmer, "the inferiority of the cat must be allowed, as her general character is artful, revengeful, cruel, rapacious, and ungrateful. Nature has endowed her with the qualities of a beast of prey, being formed to live upon animals weaker and more defenceless than herself. Yet, when domesticated, there have been some instances of sagacity and attachment, in this creature, that may serve to diminish the stigma that is cast upon the species. Our countryman, Mr. Pennant, tells us, that a very remarkable accident befel Henry Wriothesly, Earl of Southampton, the friend and companion of the Earl of Essex, in his fatal insurrection. After he had been confined in the Tower a short time, he was agreeably surprised by a visit from his favourite cat, which, according to tradition, having found her way thither, descended the chimney of his apartment, and seated herself by her master. He adds, that a picture, in the possession of the Duchess of Portland at Balstrode, of this nobleman, in a black dress and cloak, with the faithful animal at his side, may be supposed either to confirm the fact, or to have given rise to such an extraordinary story.

"A circumstance happened in my own neighbourhood, a few years ago," continued Mrs. Palmer, "the truth of which I cannot doubt, as it was related to me by a person who was a spectator of the occurrence*. The mistress of the house was sitting by the fire, when the cat came to her, and looking up in her face, mewed most piteously. At first, being engaged, she paid no attention to it; but the cat was not to be discouraged by this neglect: she continued her cries, going towards the door, and returning to the lady, in the greatest agitation. These actions were so often repeated, and in such an impressive manner, that she felt curious to know the cause of such uneasiness; though she was reluctant to leave her seat, till the cat, extending her claws, pulled her by the apron. She could no longer resist the importunity of the distressed animal: she rose, and followed her conductor into a small wash-house, where some tubs, partly filled with water, were standing, into one of which a child, nearly two years old, had fallen, and was in danger of drowning. This intelligent cat saved the child's life, and in this instance showed a degree of attachment superior

^{*} On the authority of Mrs. Cobbold of Ipswich

to that commonly observed in her kind. Yet, on the removal of the family, some time afterwards, she could not be retained in their new habitation, but, in spite of every precaution, returned to their former abode."

"The attachment of cats to houses, rather than persons," replied Mrs. Saville, "is supposed to arise from their perfect knowledge of the outlets and passages of the place where they have lived, as well as the holes in which the rats and mice have fixed their retreats. Now it is possible, that the aversion they show to a change of situation, may originate from a fear of want of food, from not knowing where to seek for their prey."

Thus our meetings pass in the most agreeable and profitable manner, instruction being mixed with our conversation; and it seldom happens that we part without hearing some curious anecdotes, either relative to history, the characters of great men, the wonders of nature, or some other interesting subject. And when any thing is more extraordinary than usual, I insert it in a common-place book that I keep for the purpose. Looking over this book in the morning, I was struck with the following article, which I thought worth your perusal. Mr. Parkinson, in his Organic Remains, makes a calculation of the number of pieces he found in a species of ani-

mal fossil, of the family of encrinites, that is truly astonishing. "A careful examination," says he, "ascertains the curious fact, that, independently of the number of pieces which may be contained in the vertebral column, and which, from its probable great length, may be very numerous, the fossil skeleton of the superior part of this animal, consists of at least twenty-six thousand pieces." They are disposed in the following manner:

Of the bones forming the body there	
are five central	5
Five ribs	5
Five clavicles	5
Five scapulæ	5
ARMS.—Six bones in each of the ten	
arms	60
HANDS.—Each hand being formed	
of two fingers, and each finger	
consisting of at least forty small	
bones, these, in twenty fingers,	
make	800
Tentacula: thirty proceeding from	
each of the six bones, in each of	
the ten arms, make	1800
Thirty proceeding, on the average,	
from each of the eight hundred	
bones of the fingers, make	24000
(D. 1)	00.000
Total	26,680

What

What wonderful art and mechanism does this creature display! And though so complex in its construction, yet, when alive, every limb, every joint, and every bone, performed its part without disorder, or in any way interfering with each other: affording complete enjoyment to the creature, and enabling it to move in every direction which the functions of its nature required.

The globe we inhabit abounds with objects both curious and surprising, yet multitudes of people, and those of the better sort, live fifty or sixty years upon it, without making the faintest attempt to become acquainted with them. Does this proceed from a want of taste, or a neglect in forming the mind early to observation? I rather think the latter, for surely none can see the beauties of creation, and not admire them. Children brought up in crowded cities, are to be pitied in this respect: they see scarcely any thing but the works of art, and they associate the ideas of beauty and value, to the productions of the mechanic only. An insect is often an object of abhorrence to them, when, if they would examine it in its true point of view, it would teach this important lesson: That the most insignificant of the Creator's works, are full of wisdom and goodness.

I am sorry to find you derive so little pleasure from the society of the Misses Ormond, and sincerely sincerely regret that they are insensible to the proper use they should make of their newly-acquired fortune. It might have been happier for them to have remained in a moderate station, though it must be acknowledged, that there may be as much pride in a cottage, as in a palace. I fear these poor girls had always the same disposition, and that their unexpected change of fortune has done nothing more than elicit the latent spark. Grandeur they may enjoy, but happiness and pride have no alliance: it is impossible they should reside in the same breast. The proud man must meet with mortifications: he must see some rise above him in wealth, fortune, or dignity, and be wretched.

Mrs. Saville is preparing for a walk; Rachel is at my elbow, with my bonnet in her hand; so adieu, adieu, says your affectionate

CAROLINE.

LETTER XIV.

FROM EMILY TO CAROLINE.

DEAR CAROLINE,

So far from pitying you for your banishment from London, and from all the luxuries of genteel life, I am inclined to envy the delights you enjoy in your snug cottage; where you seem to possess all the solid comforts you can desire, with many intellectual pleasures, that are seldom to be found amongst these who are continually on the search for something new to banish reflection and kill time. The society of Mrs. Saville and the amiable Rachel, alone is a compensation for that of half your town acquaintance, whose highest subject of investigation is the most becoming dishabille, or the most dazzling full dress. The Misses Ormond weary me with this topic: every time they have a fresh supply from their milliner or dress-maker, their coach is ordered, for the friendly purpose of exhibiting the latest fashions to my admiring eyes. But your example has checked my ardour for being the first in the mode, or giving into every folly that is authorized by the multitude. My applause, therefore, diminishes in value, and they already laugh at me, as being quite

quite Gothic, because I will not appear half naked, and determine to have the petticoat of my gowns made wide enough to allow me to sit down without exposing my legs. Our correspondence is also a subject of ridicule for them: they say we write about nothing but cats, and dogs, and magpies, and that our letters could only amuse a man who shows wild beasts at a fair. They have no eyes for the beauties of nature, or the wonders displayed in the dispositions of the various tribes of animals. The only individual they notice, of the inferior orders of creation, is a delicate French lap-dog, which they carry in their arms, and on which they bestow as much tenderness and attention as would bring up a child. This dog is washed and combed regularly, and fed upon the most delicate food, whilst the petition of an officer's widow, with four children in a starving condition, was refused, because they had nothing to spare; when, only a few days before, they had purchased this useless creature for five guineas. But they are so wholly occupied with themselves, with their rank and consequence, and the gratification of their vanity, that they have no place in their hearts for the pleasures of sympathy with the unfortunate, or the exquisite gratification of relieving their distress. They have a great desire to be accomplished, especially in music, because

it is fashionable; but, except for that, they have neither taste nor application. And as for the cultivation of their understandings by a course of reading, it is forbidden by want of leisure and inclination. Their reading seldom extends beyond a popular novel. They openly avow that they do not think it necessary, in order to make a figure in company, and therefore it is a useless labour; "for," says Charlotte, "if a young lady can dress, dance, and play, there is no opportunity of enquiring whether she knows a great deal. Besides, the men do not choose learned wives, lest they should have more knowledge than themselves." An elderly lady, who was sitting by when she made this remark, said, that men of sense were not afraid of women whose minds were enriched with the productions of the best authors; but they very properly avoided the pedantic display of smatterers in learning, who assumed, upon very partial acquirements, a superiority to which they had no pretensions. That she who outstepped the limits of that modesty, which is the chief ornament of the sex, whether in exhibiting her knowledge, or in the fredom of her manners, rendered herself equally an object of disgust and ridicule. That it was not ignorance, but humility, that was valued in young women; and that, whilst they kept their proper places, there was no danger of a wellfurnished furnished mind exciting the jealousy of our male relatives.

I was sorry her observations were interrupted by the arrival of a cousin of Lord Ormond's, who is lately returned from the East Indies. He brought with him many curiosities, as presents for the young ladies. After the shawls, chints, and taffeties, had been opened and sufficiently admired, several birds and a monkey were introduced. The latter, his lordship did not choose to accept; because, he said, he still bore the scar of a bite, given him fifty years ago, by one of the tribe, in a fit of revenge. "The animal," continued he, "was of that species called montego: he was kept by a farmer, at a few mile's distance from the village where I went to school. It was a holiday, and a party of us directed our walk to the farm, in order to amuse ourselves with the tricks and grimaces of this monkey, which, being the only one in that part of the country, was regarded as a great rarity, and often visited by the boys of our school. It was fortunate for me that he was confined, by a strong chain, to the shed which was built for his habitation, or he might have attacked my throat, and done me a more serious injury. All my companions had furnished their pockets with nuts, apples, and gingerbread, which they had provided for his refreshment, a precaution

precaution that I alone had forgotten. Being very unwilling to approach Jacquot with an empty hand, I offered him a cockle-shell that I had picked up on the sea-shore: he seized it greedily, and presently opening it with great adroitness, was much incensed to find nothing in the inside of it, perhaps supposing that I had imposed upon him. He instantly expressed his resentment by throwing it away with great indignation, and, by his whole behaviour, showing his contempt for the trick he thought I had put upon him. My companions continued playing with him for more than half an hour, whilst I and another amused ourselves about the farm-yard. At last we were summoned to prepare for our return, when each of us took leave of the monkey by shaking his fore paw; a civility he received very cordially till it came to my turn, when, recollecting the offence I had given him, he flew at me with the utmost rage, and left this mark in my hand, which I shall carry to my grave. Therefore, no monkeys, if you please, young ladies," said the old gentleman, in an angry tone.

The girls looked vexed, but did not dare to reply; for though they have a great ascendency over him by wheedling and coaxing, like other weak men, he is violent when opposed.

The conversation took a general turn, and I

was well entertained by many of the observations of the traveller, who has been long abroad: and perceiving that my attention was fixed upon the animals, and that I was desirous of knowing their habits and instincts, he very politely indulged my curiosity with several particulars that he had seen in different parts of Asia. But nothing delighted me so much as the extraordinary contrivance of a certain species of sparrow*, found in Hindostan, which, in the nighttime, lights up her nest with glow-worms; and, after collecting them for this purpose, she fastens them to the inside of her nest, by means of a peculiar kind of clay, of a glutinous nature. What an elegant illumination! could our minds be divested of the sufferings of the poor glowworms, whose brilliancy subjects them to a painful death: they form an apt emblem of beauty, that so often misleads its possessor into error and folly.

The subject is less pleasing, but the conduct of the creatures that are exposed to each other's fury, in the combats of wild beasts, in the island of Java, at which this gentleman was present, marks their instincts for self-defence, in a very strong point of view †.

* Asiatic Annual Register, 1802.
† Stavorinus' Voyages to the East Indies.

When a tiger and a buffalo are to fight for the amusement of the court, they are both brought upon the field of combat in large cages. The place is surrounded by a body of Javanese, four deep, with levelled pikes, in order that, if the creatures endeavour to break through, they may be killed immediately. This, however, is not so easily effected, but that many of these poor wretches are torn in pieces, or dreadfully wounded by the enraged animals.

When every thing is in readiness, the cage of the buffalo is first opened at the top, and his back is rubbed with the leaves of a certain plant, which have the singular quality of occasioning intolerable pain. The door of the cage is then set open, and the animal leaps out, raging with agony, and roaring most dreadfully. The cage of the tiger is then likewise opened, and fire is thrown into it, to make the beast quit it, which he generally does, running backwards out of it. The tiger no sooner perceives the buffalo, than he springs upon him: his huge opponent stands expecting him, with his horns upon the ground, in order to catch him upon them, and throw him in the air. If the buffalo succeeds in his design, and the tiger recovers from his fall, he generally loses every wish of renewing the combat; and if the tiger avoids this first attempt of the buffalo, he springs upon him, and, seizing him

him in the neck, or other parts, tears his flesh from his bones. In most cases, however, the strength of the buffalo overcomes the address and ferocity of the tiger.

This gentleman has promised to pass a few weeks at Belvoir Castle, which will probably afford me opportunities of collecting more anecdotes on our favourite topic, as he appears to be a minute observer of the wonders of nature.

My letter is extended to so great a length, I can only add, that I am, with sincere attachment,

Yours,

EMILY.

LETTER XV.

FROM CAROLINE TO EMILY.

MY DEAR EMILY,

REVENGE is not confined to the monkey tribe: other animals are very susceptible of this odious passion, and as they are deficient in that reason which is given to us to restrain our evil propensities, they yield to the impulse of their feelings, without an attempt to subdue them. Sonnini, who visited Egypt, tells us that the camel, so distinguished for its patience and forbearance, is yet sensibly affected by injustice or ill-treatment. "The Arabs," says he, "assert, that if a person has struck one without cause, he will not find it easy to escape its vengeance; and that they will retain the remembrance of if, till an opportunity offers of gratifying their revenge. It is said, that in their fits of rage, they sometimes take up a man with their teeth, throw him on the ground, and trample him under their feet. Eager to revenge themselves, they no longer retain any rancour when once they are satisfied; and it is even sufficient, if they believe they have satiated their vengeance. Accordingly, when an Arab has excited the rage of a camel, he lays down his garments in some place near which the animal

animal will pass, and disposes them in such a manner, that they appear to cover a man sleeping under them. The camel knows the clothes of him by whom he has been treated with injustice, seizes them in his teeth, shakes them with violence, and tramples on them in a rage. When his anger is appeased, he leaves them; and then the owner of the dress may make his appearance without fear, load and guide the animal, who submits, with amazing docility, to the will of a man, whom, just before, he wished to destroy.

"I have sometimes seen," says he, "drome-daries, weary of the impatience of their riders, stop short, turn round their long necks to bite them, and utter cries of rage. In these circumstances, the rider must be careful not to alight, as he would infallibly be torn to pieces: he must also refrain from striking his beast, which would only increase his fury. Nothing can be done but to have patience, and appease the animal by patting him with the hand, which frequently requires some time, when he will resume his way and his pace of himself."

To those who view the animal kingdom with an attentive eye, the correspondence of the structure of the different creatures, as well as the peculiar senses bestowed upon each, with their wants and the climates they inhabit, are no less convincing proofs than their instincts, of the

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Infinite

Infinite Intelligence that has adapted them exactly to that place which they are appointed to fill in the ranks of creation. The camel is to the Arab, what the rein-deer is to the Laplander: it is his all-his treasure. These creatures supply food and clothing to their possessors, besides their wonderful powers of conveying their masters, with great rapidity, to a vast distance. The camel is formed to traverse extensive deserts of sand, where the thirsty traveller often perishes from want of water: it is accordingly provided with a peculiar resource against the calamity to which it is so frequently exposed. Besides the four stomachs, which it has in common with other ruminating animals, it has a fifth bag, in which water is preserved, without spoiling or mixing with the other aliments. When the camel is on a journey, and wants water to soften its food whilst ruminating, it has only to contract this bag by means of certain muscles, and as much water as is required passes into its stomach. In consequence of this peculiar formation, this valuable creature can take a prodigious quantity of water at one draught, and can sustain life for several days without drinking. They are, moreover, endowed with the extraordinary property of discovering water by their smell at half a league's distance; and, after being some time deprived of it, will hasten towards towards the spring, long before their riders perceive that any is at hand.

We have already seen that the goat is furnished with a hollow foot, to prevent it from slipping off the precipices: the broad foot of the camel is equally well adapted for treading on a sandy level; nor can it make a firm step on moist or slippery ground, or climb with safety a steep ascent or a shelving declivity. Had the camel and the goat, (the one an inhabitant of the plain, the other of the mountains,) each remaining in other respects the same, exchanged feet, neither could have subsisted in their native climes. The properties of the rein-deer are as opposite to those of the camel, as the frozen regions he inhabits are to the scorching deserts of Arabia. He can endure the utmost extreme of cold, and his hunger is satisfied with a little moss, that his instincts teach him to seek with his hoofs under the snow.

Can any one observe this harmony of nature, and not acknowledge the Divine Hand that has so nicely adapted the creature and its natural situation, to each other? The whole earth teems with such correspondencies, had I but knowledge and leisure to display them. The rational mind cannot doubt that the innumerable worlds that are dispersed in infinite space, abound likewise

in monuments of the same wisdom and good-ness.

An instance of this conformity of the structure of animals, with the mode of life appointed for them, occurred to us last night, as we were drinking tea at Mr. Palmer's. A boy having discovered the haunt of a viper near the garden hedge, Mr. Palmer hastened to the spot, destroyed the dangerous intruder, and afterwards brought it into the parlour, in order to show us the curious formation of the jaws and gullet, so admirably adapted for swallowing food much thicker than the usual size of the creature's body. In order to accomplish this purpose, the head of this creature is broad and flat, having a wide mouth, of very uncommon and disproportionate size, which allows the jaws to gape to a great extent. But this opening, capacious as it is, would not be capable of receiving the viper's prey, had not its capacity of enlargement been still further increased by the following nice contrivance. The jaws are not united together at the bottom, as in the human mouth, by a sort of joint resembling a pair of hinges, but connected by a strong muscle, which is so elastic as to keep the features firm, when not in action, and to allow their being stretched to an immoderate extent, when the size or form of the prey seized by the viper requires it. The gullet or throat, receives the food from the mouth, and being very large and elastic, easily enlarges or contracts, according to the size and shape of the substance to be swallowed. From hence, a part only is at once received into the stomach, which is by no means so large a receptacle as the gullet: here it continues, till the usual course of digestion reduces it to chyle, which, going off in the natural way, affords room for the remaining part to enter the stomach, and digest in like manner as the former.

The examination of this viper turned the conversation on the subject of serpents in general, and particularly on the strange power that has often been attributed to them, of fascinating their prey to that degree, that, notwithstanding the dread that every creature feels at the sight of their natural enemies, the prey of the serpent tribe are said to approach their destroyers, and even to go, by an irresistible impulse, into their mouths. Some naturalists dispute the existence of this power in the serpent, and imagine that fear occasions this self-devotion of its prey; whilst others suppose, that the maternal affection of birds induces the old one to present herself to the ravager, with design to withdraw his attention from her young; and, in her anxiety for their safety, to venture incantiously so far, that she can no longer recede from the grasp of her

enemy. That this is not always the case, is proved by an experiment mentioned in the Philosophical Transactions. "A viper-catcher. who had more than sixty living vipers in a chest, put a living mouse in among them. Now it is well known, that these creatures never feed whilst in confinement, unless it be a female that is with young. One of the vipers in this chest, happened to be in this situation. None of the others paid any attention to the mouse, but she raised up her head a little, and looked furiously at it. The terrified mouse stood still for a considerable time, though the viper continued rolled up in a spiral form, only raising up her head and looking at it, vibrating her tongue at the same time. The mouse at length took courage to move, but without running away, only walking, as if terrified, round and round the viper, squeaking frequently as it went, till at length it came before the head of its enemy, which was still in an erect posture, with the mouth open. The unfortunate mouse, after some time, drew nearer, and at last crept into the viper's mouth, where it was gradually swallowed, without obliging her to alter her position."

Tasso has given a beautiful description of one of this wily race, in his Jerusalem Delivered, which to you, who have a poetical taste, can-

not fail of being an acceptable sequel to the subject.

"When lo! a serpent rushing from his cell,
Oppos'd their passage, horrible and fell!
Aloft his head and squalid breast he held;
Bestreak'd with gold, his neck with anger swell'd;
Fire fill'd his eyes; he hid the path beneath;
And smoke and poison issued with his breath.
Now in thick curls, his scaly length he wound;
Now trail'd his opening curls along the ground."

I will now dismiss the inferior orders of creation, and fill the remainder of my sheet with some anecdotes that will make you better acquainted with Mr. Palmer's character. When he was first presented to the living he now enjoys, the generality of his parishioners were sunk in the grossest ignorance, and had scarcely any other notions of religion, than such as they had imbibed from the wildest enthusiasts, called Jumpers, who bound them in the chains of superstition. His first care was to make himself beloved, by the exercise of every kind office, and to alleviate, as much as possible, their temporal wants. Having gained their affections, he began to give them advice as a friend; and by the slow but. powerful influence of example, united with precept, gave them new and rational views of their duty. The interest he took in their affairs, the condescending and sympathetic visits, that

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both

both he and Mrs. Palmer frequently paid to their neighbours of all classes, endeared them greatly, not to the parish only, but to those who lived beyond its boundaries. General esteem was followed by a degree of respect approaching to veneration. As he is far more desirous of promoting the cause of piety and virtue, than of obtaining the reputation of an orator, his discourses are plain and instructive; enforcing the example of our Divine Master, rather than displaying his learning on abstract subjects, that his congregation do not understand: so that the meanest capacity may go home the wiser and better for the lesson delivered from the pulpit. The great aim of his life is, to discharge, conscientiously, the sacred functions of his profession, with the moderation and humility of a Christian, without aspiring after riches or dignity. Nor will you accuse me of drawing a flattering picture, when you know, that, through the means of a powerful family connexion, he was, some time ago, presented to a lucrative and dignified benefice; but no offers, however tempting-no persuasions-could induce him to leave his flock, to whom he considers himself united for life; and that, having once engaged to devote his time and faculties to their spiritual improvement, he has determined to reject every proposal of temporal advantage, that

that should dissolve a connexion so dear to him, and that yields so much satisfaction*. With such opinions, you may believe he has no taste for the pleasures of luxury or indulgence: his table is plain, though plentifully supplied. His wife admires his principles, and promotes all his plans. Simplicity, with neatness, appear in every part of her domestic arrangements. The children are brought up to be useful, rather than to shine: the cultivation of their understandings is preferred to showy accomplishments; but great attention is paid to their manners, and the government of the temper. They are but young at present, therefore it is impossible to decide on their future characters; but hitherto they are distinguished by their gentleness, activity, and affectionate dispositions.

With this happy family I pass much of my time in a very agreeable manner; perfect intimacy subsisting between them and Mrs. Saville. I am neither dull nor solitary with such associates. My mind is opened to new views: I see things in a different light; and this retirement, which would formerly have been a banishment, is now my choice. My amusements, my em-

ployments

MITTING

^{*} A similar anecdote is related of Dr. Burgess, the present bishop of St. David's.

ployments are new; but they have not less zest than my former ones, and they afford far greater variety, than one dull round of visiting and public diversions.

Adieu, my Emily: write soon, and you will give pleasure to your sincerely affectionate

CAROLINE

LETTER XVI.

FROM EMILY TO CAROLINE.

DEAR CAROLINE,

When my father and Mr. Craven return from the sports of the field, they generally chat over the exploits of the day, and are often led into curious disquisitions on the nature of animals, and other topics of natural history. On these occasions, I am usually an attentive listener, as I employ myself with my work; but seldom take any part in the conversation, unless my curiosity is particularly excited, my father not being fond of interruption. But the other evening, I was so much interested, I could not restrain myself from urging Mr. Craven to give me all the information he could, on the amazing swiftness of the flight of birds.

A partridge that had escaped beyond the aim of their guns, gave rise to an argument on the comparative velocity of different creatures.

My father remembered having seen a famous race-horse, named Eclipse, gallop a mile in a minute, and he was of opinion, that few birds could fly faster. Mr. Craven replied, that the instance he mentioned, far exceeded the utmost efforts of horses in general, but that even that extraordinary

extraordinary example would not bear any comparison with the ease and swiftness with which the winged tribes cleave the air; especially when the extreme fatigue, lassitude, and debility, that follow such exertions in a horse, are taken into the question. "But," continued he, "in order to give you a more accurate idea of the surprising capacity of birds, to pass over a vast space in a short time, I will relate the gradations of motion in different animals, as I heard them from a gentleman who still preserves a taste for the almost-forgotten diversion of hawking, and who has paid particular attention to the present subject. At a Newmarket coursing meeting, the fleetest horse in training was taken out, and a hare being found at a few miles' distance from any cover, the very best brace of greyhounds were let out of slips. It was a dry morning in March, when hares are supposed to be most swift. The greyhounds were never able to turn the hare, which is a proof that her speed was superior to theirs. The jockey who rode the horse, was one of the most skilful of his profession, and of a remarkably light weight. His account of the pursuit, in the language of sportsmen, was, that he could live, or keep up with the dogs, but could not draw, or get nearer the hare; nay, he acknowledged that she continued

to gain upon him*. Rabbits never venture far from their burrows, but it is well known, that, for the distance they go, they run much faster than a hare: a fact clearly shown by this circumstance, that few greyhounds ever kill a rabbit in coursing: when they happen to catch them, it is by surprise, or a sudden spring. The slowest flying hawk will strike upon a rabbit with scarcely an appearance of moving; so much more rapidly does it fly, than a rabbit can run. Yet this hawk flies too slowly to catch a partridge: a much swifter species of hawk is requisite for that pursuit, and one of still greater speed for a pigeon; but for a swallow, a hawk must be found that can outstrip all these competitors. Therefore, if we take the speed of the swiftest horse at sixty miles an hour, (though no horse ever maintained that pace for so long a time,) as a standard by which the rest may be estimated, and pursue the calculation from the horse to the greyhound, hare, rabbit, slow hawk, partridge, pigeon, swallow, and hawks of the swiftest kind, we may pretty satisfactorily account for the amazing rapidity with which birds perform long voyages. If we only suppose them to go at the rate of half a mile in a minute, for

^{*} Sir John Seabright favoured me with the above information.

the space of twenty-four hours, they will pass over, in that time, an extent of more than seven hundred miles; but, if assisted by a favourable current of air, there is reason to suppose, that an equal voyage may be performed in less time."

My father, though astonished at the result, acknowledged that Mr. Craven's reasoning had the greatest air of probability, however incredible it might appear at the first view, to those who had never made the comparison between the known speed of quadrupeds, and the probable swiftness of birds. "How surprising," said I, "that such a little tender creature as a swallow, should be capable of enduring such excessive fatigue. and travelling to such vast distances." This remark drew from Mr. Craven many observations on the harmony of the structure of birds, with their habits and necessities, and the migration of various kinds of animals; which show that he has collected knowledge from books, as well as experience, and pleased me so well, that I cannot withhold them from you. "The goodness and wisdom of Providence," said he, "has furnished every creature with those things best adapted to its wants. Birds of passage are admirably qualified for such expeditions as their instincts prompt them to undertake. Let us select the swallow as an example. The narrowness of its front, if the expression is allowable, exposes

but a small surface to the resistance of the air. The glossy smoothness of their feathers, which lie so compactly over one another, and, above all, the membraneous cells or cavities distributed in their bones for the reception of air, make them light and buoyant. The length of the outward feathers of the wings of the swallow tribe, qualify them in a peculiar manner, for their mode of life, which is being almost always on the wing. Their food is insects, and their forked tail serves as a rudder to enable them to dart either way in pursuit of their nimble prey, which would otherwise escape them."

At this moment, my cousin Henry, who is a student at Cambridge, but much fonder of the diversions of the turf than the stores of ancient learning, entered the parlour, and confirmed the assertions of Mr. Craven, with respect to the progressive swiftness of different kinds of birds, and their capacity for maintaining their speed for a great length of way. He said, that a favourite carrier pigeon won him a considerable sum, by flying from Newmarket to London, a distance of sixty miles, within the hour. Since this conversation, I have gone every evening, about sun-set, to the hill behind the plantations, to watch the rooks returning home from feeding; and, I observe, that in the space of a few minutes, I often see them pass a considerable extent; for I can perceive them four or five miles before they reach me, and as far after they have passed me; and the whole, comparatively speaking, the action of a moment. The surprising power of wing bestowed on birds of passage, makes me long to know some particulars of their excursions: perhaps your friend Mr. Palmer, will satisfy my curiosity. If you can obtain any particulars on this subject, it will furnish you with a topic for your reply, which I shall impatiently expect; as nothing affords me more pleasure; than to hear from you, and to share in the adventures of your cottage life.

Direct to me, in London; for, to my great mortification, my father's affairs oblige him to take up his abode there for a few weeks. I am, my dear Caroline, your affectionate friend,

EMILY.

LETTER XVII.

FROM CAROLINE TO EMILY.

MY DEAR EMILY,

Your enquiry concerning the passage of birds from one country to another, has procured for us a very entertaining lecture from Mr. Palmer, on this curious subject, the general sense of which I shall transcribe in my own words. Many species of birds change their situation, regularly, at particular seasons of the year; either because the food which they live upon fails, or for the sake of a warmer or colder climate, or in search of a more secure retreat for rearing their young. Some cross wide seas, and retire to distant countries; whilst others migrate only from one part of the same country, to another part that is more or less warm, according to their constitution. Linnets are said only to shift their quarters, breeding in one part of the island, and removing, with their young, to another. It appears, that all the individuals of a species do not always make the same journeys, or retreat to the same places. The hooded crow remains in North Britain the whole year, whilst some of the species have been known to breed on Dartmoor, in Devonshire. Of those which

which inhabit Sweden, some remain in certain provinces the whole year, whilst others, in different situations, change their habitations.

It is well known that the cuckoo leaves us in autumn, and does not return till spring; but where he hides himself during the winter, has not yet been discovered.

The wryneck is supposed to feed on ants: when these insects have retired into their winter quarters, hunger obliges him to seek support in a warmer climate.

The fieldfare and the redwing live on berries. Our hedges supply them with this kind of food in winter, and in summer they are feasted in the forests of Norway, and other northern countries.

Larks, fly-catchers, wagtails, and warblers, feed on insects and worms; yet only part of them quit our island on the approach of winter, though it is reasonable to suppose, that the same motive would influence them all to act alike.

Every species of curlews, woodcocks, sandpipers, and plovers, leave this country in the spring, and retire to the North of Europe to breed. As soon as the young can fly, they return here; because the frost, which sets in early in those cold regions, hardens the ground, and deprives them of their natural subsistence, which is worms, as their bills can no longer penetrate the earth, in search of their prey.

Lapland is a country of lakes, rivers, swamps. and mountains, covered with thick and gloomy forests, that afford, in the summer season, a secure, undisturbed retreat to innumerable multitudes of water-fowl, of almost every species, which, in winter, disperse over the greatest part of Europe. Wild swans, geese, ducks, goosanders, divers, and other water-fowl, repair to Lapland to pass the summer, where they rear their young, and are daily regaled on myriads of the larvæ of gnats, and other insects, that abound in the lakes of that country. Few of these tribes breed in England. They return from their northern excursion about the beginning of October, and first hover round our shores, till, compelled by severe frost, they betake themselves to our lakes and rivers. Some of the web-footed are of more hardy constitutions than others, and they are able to endure the ordinary winters of the northern regions; but when the cold is unusually severe, they are obliged to seek a shelter in our more moderate climes.

The gannet visits our shores, in pursuit of the shoals of herrings and pilchards that annually migrate into our seas, and sometimes extends her journeys even to the Tagus, to prey on the sardina. Few of the different species of wild geese

and ducks breed here: perhaps, because they are too much interrupted in a populous country; for it appears, that birds of a shy disposition sometimes leave their usual station for the sake of privacy, when the number of inhabitants increases. Naturalists assert, that when great part of our island was a mere waste, a tract of woods and fens, many species of birds, which now migrate at the breeding season, remained in full confidence throughout the year.

The egret, a species of heron now seldom found in this country, in former times abounded here in great numbers; and the crane, that has totally forsaken us, bred familiarly in our marshes, as, like other cloven-footed water-fowl, (the heron excepted,) they make their nest upon the ground, exposed to the rude touch of every intruder. When the number of people increased, forests were cut down, swamps drained, and the plough made inroads where the ground had never before been turned up: these operations disturbed the solitary haunts of the timid wildfowl, and, by degrees, drove them to seek a . situation more congenial to their habits; whilst those species that nestle on the almost inaccessible rocks, that in some parts impend over the British seas, still breed there in vast numbers, having nothing to fear from man, except the rare disturbance

turbance of a few desperadoes, who venture their lives in search of birds' eggs.

The migration of animals is a surprising propensity, evidently impressed on them for their preservation, by their Creator. Each species knows the proper season for departure, and the course they should pursue. They understand one another, and assemble for their voyage, at some appointed signal unknown to us. The time, the place, and the order of their passage, differ according to the species; and what is a still more striking proof of design in these emigrations, is, the conformity between the vegetation of some plants, and the arrival of certain birds of passage. Linnæus observes, that the wood anemone blows in Sweden on the arrival of the swallow, and the marsh marygold, when the cuckoo sings. And, it is most probable, that it is only from the want of accurate observation, that many more such agreements remain unknown; for there may be attractions, or objects of aversion, between plants and animals, that are wholly concealed from us. It is said, that birds of passage follow a leader during the day, who is occasionally changed, and, during the night, makes a continual cry, that their company may be kept together by the sound.

Swallows that have been hatched too late to acquire their full strength of pinion, or such as are

maimed or diseased, have frequently been found in the hollows of rocks, on the sea coasts, and even under water, in a torpid state, from which, warmth has revived them. From these circumstances, doubts have arisen, whether swallows migrate, or lie dormant; but there are so many proofs of their migration, that there is ground to believe these deviations are only accidental. On the approach of cold weather they have been often observed hovering on the sea coast, as if waiting for a calm, or a favourable wind, to waft them to their destined port. In warm climates, these tender birds remain stationary, because there is no cold to injure them, or destroy the insects upon which they feed.

Linnæus says, that the female chaffinches alone, leave Sweden in September, and migrate to Holland, forsaking their mates till the return of spring; a deviation from the usual course, for which it is not easy to account.

This extraordinary propensity to change their residence, is not confined to birds; fish and insects are known to migrate at certain seasons. Shoals of herrings, cod, and haddocks, approach our shores at a particular time of the year, and quit them with equal regularity, without leaving a single one behind.

Adanson, a celebrated traveller, relates, that near the river Gambia in Africa, about eight in

the morning, in February, there suddenly arose over his head a thick cloud, which darkened the air, and deprived him and his companions of the rays of the sun. He soon found that it was a swarm of locusts, raised about twenty or thirty fathoms from the ground, and covering an extent of several leagues. At length, a shower of these insects descended, and, after devouring every green herb whilst they rested, renewed their flight. This cloud was brought by a strong east wind, and was the whole morning in passing over the adjacent country. To the testimony of this traveller may be added, that gnats, bees, and muskitoes, sometimes migrate from one place to another.

Here Mrs. Saville interrupted Mr. Palmer, by remarking, that rats migrate from place to place; as, when she was young, she had once an opportunity of observing. Being on a visit with a relation who resided in an old mansion, she slept with a maid-servant, at the end of a long gallery, in a chamber, to which belonged an anti-chamber, divided from the bed-chamber by folding doors, which were set open, on account of a light placed in the middle of the anti-chamber. About midnight, they were awakened by a noise, and, on opening the curtains, were much alarmed on seeing a great number of rats surrounding the rushlight. Not knowing how to drive н

drive away these unexpected enemies, they threw a pincushion into the midst of them, and, in a moment, the whole company disappeared. The sudden decampment of the rats, frightened the two girls almost as much as their appearance. The servant explained the phenomenon as an omen of some misfortune, which, though not satisfactory to Mrs. Saville's more cultivated mind, she was still unable to account for what she had seen, and was almost ready to doubt the evidence of her senses. In this state of suspense she lay watching till morning. When it was time to rise, the maid attempted to reach some of her clothes that had fallen on the ground, when a rat, which had concealed itself in them, flew at her and tore her arm. The next day, carpenters were employed to examine the apartments, but neither crack nor cranny was found through which a rat could pass; it was therefore supposed that these rats were on a journey, and in their passage came down the chimney, and returned by the same aperture *.

Mr. Palmer said, that this was an extraordinary instance of the migration of rats, which, in this country, was effected in smaller companies than in the cold regions of the north;

^{*} This circumstance happened to an out room of the author's, in the house opposite Bow Church in Cheapside.

where, as travellers relate, the great Norway rats migrate in astonishing multitudes, and never go out of their way, but pass over any obstruction they meet in their road.

Evening closed the conversation. Before we parted, it was proposed that Rachel and I should accompany Mr. and Mrs. Palmer, on a little excursion to the sea-coast. We both looked at Mrs. Saville for her approbation; for no pleasure could tempt either of us to do any thing disagreeable to her. With a gracious smile she nodded assent, and to-morrow we leave her for a few days. On my return, I shall write again, if your town engagements will leave you leisure to read an epistle from one, whose best claim to your notice is her affection.

CAROLINE.

LETTER XVIII.

FROM THE SAME TO THE SAME.

DEAR EMILY,

AFTER a very pleasant excursion through the Isle of Anglesey, I am again fixed under the protection of my kind friend, Mrs. Saville, who has the valuable art of rendering "to-morrow cheerful as to-day;" and, by a happy succession of employment for the body and the mind, teaching her inmates to be contented with themselves, and strangers to ennui. Every one of her family feels the sympathy of friendship for each other. She well knows how to mix the dignity of authority with kindness. Her servants are bound to her, not merely by the sordid tics of interest, but by those of affection: they daily feel her solicitude for their most important concerns, and they reward her care by unfeigned attachment. Old Sarah was as much rejoiced to see us safely returned, as Mrs. Saville herself. She lived with my aunt before Rachel was born, and though she treats her with great respect, she is as fond of her as if she were her mother. Had you seen our reception, you would have supposed we had been absent a month, instead

of a few days.—But I have said enough on this subject: it is time to amuse you with something of a different nature.

In the course of our excursion, we visited the small island of Priestholm, which lies near the coast of Anglesey. It might be called the land of puffins: fifty acres of ground were literally covered with them: the air, the sea, the rocks, seemed alive with them. They are so tame and inactive, as to suffer themselves to be knocked down with a stick. Their legs are placed so far back, that they stand with their heads nearly upright. Their bill forms a triangle, and is of an orange red. The upper part of the plumage, and a collar round the neck, are blackish, softened into a greyish white; and the under parts are quite white. The legs are orange. Their tail and wings are short. They do not rise from the ground with facility, which makes them generally careful to alight on such places from whence they can either run down the slope of a hill, or throw themselves from the rocks.

Pussins are birds of passage, and resort to these coasts in the spring, remaining here till about the 11th of August. They are formidable enemies to the rabbits, that were once numerous on this island; for, on their arrival, they immediately take possession of the burrows in the crevices of the rocks, or on the sloping ground;

and if the latest comers find all the holes occupied, they make new ones for themselves. We were told that the male birds undertake this task; and that, whilst they are thus employed, they are so intent on their work, that they are easily caught with the hand. These invaders have nearly extirpated the rabbits; for few of these defenceless animals are able to resist the strength of their beaks.

They form something like a nest, of a few sticks and grass put together, on which the female lays a single white sgg, that is generally hatched in the beginning of July. The parent birds are thought to sit alternately, and each, by turns, go abroad for food. They are easily taken whilst sitting or rearing their young; and if set at liberty, these silly birds, instead of flying away, either from parental fondness, or for the sake of shelter, hurry back to their young brood, and fall into the hands of their enemies.

Young puffins are pickled for sale, and form an article of traffic peculiar to this neighbourhood; but they are apt to have a strong flavour, from feeding on sprats and sea-weeds.

As we have lately turned our attention to the subject of migration, perhaps you will be entertained with some account of the land-crab, that is found in the Bahama Islands, as well as in most tropical countries, and feeds upon vegetables.

tables. These animals not only live in a kind of orderly society, in their retreats in the mountains, but march, regularly, about April or May, to the sea-side, in a body of some millions at a time. At the proper season, they sally out from the stumps of hollow trees, the clefts of rocks, and the holes which they dig for themselves under the surface of the earth. When they are on their march, the ground is covered with them, so that a step can scarcely be taken without treading on them. The sea is their place of destination, and to that they advance without any deviation. No geometrician could send them to their appointed station by a shorter course: they neither turn to the right nor to the left, whatever obstacle intervenes: even if a house stand in the way, they will attempt to scale the walls. Natural impediments are not so easily overcome: they are obliged to conform to the face of the country: if it is intersected with rivers, they are then seen to wind along the course of the stream. The procession from the mountains is generally formed into three divisions. The first consists of the strongest and boldest males, that, like pioneers, clear the way, and face the greatest dangers. These are often obliged to halt for want of rain, and seek the most convenient retirement, till a change of weather enables them to go forward. The main

body is composed of females, which never leave the mountains till the rainy season is begun. They march in regular order, being formed into columns fifty paces broad, and three miles long, and so close that they almost cover the ground. In a few days this company is followed by a parcel of stragglers, male and female, that are not so strong as those which have advanced before them. They travel chiefly in the night; but if a shower falls in the day, they do not fail to take advantage of it. If they are alarmed, they turn back in a confused, disorderly manner, holding up their nippers and clattering them together, as a sort of threat to their enemies. When any one of them happens to be wounded or maimed, so that he cannot proceed, they deyour him without mercy, as if determined to get rid of all impediments, and then pursue their march.

As soon as their journey, which lasts several weeks, is concluded by reaching the shore, they prepare to cast their spawn, by suffering the waves to wash over their bodies, which is supposed to assist the growth of the eggs; for they soon afterwards appear under the barbs of the tail, in a bunch as large as a hen's egg. They now seek the shore for the last time, and deposit their spawn in the water, leaving it to the chance of accidents to preserve or destroy them.

At this season, when it is said that the waters are blackened by the crabs' spawn, shoals of hungry fish approach the shore, in expectation of this annual supply of food, and countless millions of these eggs are devoured by their rapacious enemies. Those that escape the general destruction are hatched under the sand; and soon after, multitudes of these young crabs are seen travelling towards the mountains. The old ones, by this time, are grown so lean and feeble, that they are obliged to remain in the flat parts of the country, till they are more able to return: in this state they retreat into holes, closing the entrance with leaves and dirt, that they may be secured from the air whilst they throw off their shells and gain new ones. During this operation, they are quite naked, and almost motionless. As soon as the new shell is sufficiently hardened, the crab sets out on its return, and having recovered its flesh, is, at that time, very good eating *.

It has been asserted, that when crabs have lost their shells, the place of their retreat is frequently guarded by a hard-shelled crab, who, at that time, advances boldly to meet the foe, and will with difficulty quit the field; yet shows great timidity on other occasions, and has a

^{*} Encyclopædia Britannica.

wonderful speed in attempting his escape; but, if often interrupted, feigns death, in order to deceive his pursuer, whilst he watches an opportunity to sink himself into the sand, leaving only his eyes exposed. Whether this account refers to any particular species of crab, or to the whole kind, I am not able to ascertain.

I cannot conclude without relating a very singular circumstance that has happened at the parsonage-house, and given Mr. Palmer much uneasiness *. I must begin my story by telling you, that a large house-dog is kept in the yard, who is a sagacious animal :- kind to his friends, but formidable to those whom he regards as the enemies of the family. This dog is let loose of a night. A labourer, who has been employed on the farm long enough to gain some confidence, was entrusted with the key of the barn, and frequently employed to bring sacks of corn from the barn to the house for family use. One night this man went, after the dog, who knew him well, was unchained, and took a sack of corn. The dog attended him very quietly, as long as he pursued the path that led to his master's house; but when he turned his course into the road that took him to the village, he caught

^{*} This singular instance of sagacity happened at Church - Eden in Staffordshire, and is related on the authority of the late Mr. Sneyd, of Belmont.

hold of his coat, and would not let him stir; as much as to say, "Where are you going with my master's corn?" The man tried then to go back again with the sack to the barn; but the dog, as if conscious of his design, would neither let him do that, nor yet carry the sack to the parsonage. In this dilemma the man was obliged to remain all night, standing with the sack of corn and the dog, who held him fast, though he did not bite or hurt him in the least; and in this strange situation he was found in the morning. A circumstance so extraordinary led to a discovery of his guilty intention; for he could not account how he came there with a sack of corn, pinned down by the dog, but by throwing himself on Mr. Palmer's mercy, and making an open confession of his dishonesty.

The sagacity of this faithful dog has not only, saved his master's corn, but is likely to be a means of reclaiming the man, by an early exposure of his fault; for, it seems, he has been led away by some bad companions, who persuaded him to this attempt. Mr. Palmer has taken great pains to convince him of the danger of such associates, and the enormity of his offence; and the more effectually to preserve him from any further intercourse with them, and to remove him from a place where his character is lost, has prevailed with a friend of his in Shropshire,

shire, to take him on trial, having first informed him of his misconduct. This last act of kindness entirely overcame him—he wept like a child, and made the most solemn promises of amendment. As he is young, and not hardened in vice, hopes may be entertained that he will keep his word, and afford his master the satisfaction of having, by well-timed lenity, saved a fellow-creature from ruin. How superior is this merciful conduct, to that unfeeling severity that inflicts the rigour of the law on the first offence, and gives no opportunity to the noviciate in vice to recover the false steps he has taken.

Mr. Palmer is a justice of peace, and though very merciful, and considerate of every allowance for beginners, he is as firm in punishing old offenders; and especially those who mislead the young and innocent. Mercy to them, he says, is cruelty to the rest of society; and he thinks it is his duty to prevent the repetition of crimes by a certainty of punishment.

Dinner is announced: I have only time to bid you adieu, and close my letter,

CAROLINE.

LETTER XIX.

FROM EMILY TO CAROLINE.

DEAR CAROLINE,

London is not the field for natural history, nor did I expect, in this region of bustle and visits, to collect any instances of the sagacious faculties of the brute creation; but where the mind is intent on any single pursuit, there is no place so barren, but may yield some supply of knowledge, nor any company so insignificant, but may afford some gleanings worth preserving.

We joined a large family party a few days ago at my uncle's, where the younger part of the company was excused from the slavery of the card-table, and indulged with the enjoyment of free conversation. Amongst this cheerful group was a Westminster scholar *, who related a curious fact of a blind beggar, who frequently solicits charity in that neighbourhood, particularly in Dean's Yard, accompanied by a dog, who is really a valuable friend to this poor man. He serves him as a guide, and conducts him from street to street with safety; but this office,

^{*} Edward Gibbon Wakefield, grandson to the author.

though very useful, shows no unusual degree of intelligence. Many dogs are taught to lead the blind-this dog does more: when charitable people fling halfpence from the windows, to his master, he searches carefully for them, picks them up with his mouth, and deposits them in the hand held out to receive them. And this he repeats, without being tired, whatever number of halfpence may happen to be thrown out. The dexterity of the dog in collecting the money, is an inducement for many to bestow the pittance for which the beggar pleads; especially the boys belonging to the school, who are highly amused with exercising the dog in his business, and trying to render the task more difficult by hiding the money in the mud. But whether he be guided by the scent of the copper, or the keenness of his sight, he seldom fails to find them.

This account interested the party: most of them found a story to relate, some of which are so curious, I must repeat them.

A dog belonging to Mr. Taylor, a clergy-man, who lived at Colton, near Wolseley Bridge, was accused of killing numbers of sheep. Complaints were made to his master, who asserted that the thing was impossible, because he was muzzled every night. The neighbours persisting in the charge, the dog one night was watched, and he was seen to get his head out of the

muzzled, then to go into a field, and kill and eat as much of a sheep as satisfied his appetite. He next went into the river, to wash his mouth, or quench his thirst, and returned afterwards to his kennel, got his head into the muzzle again, and lay very quietly down to sleep*. This looks like a consciousness of doing what he ought not to do, and a determination to indulge appetite by stealth.

The same design is apparent in a horse, which had been observed to disengage his head from the halter, then to open the door of the stable, and go out, in the middle of the night only, and regale upon corn in a field at a considerable distance from the stable. The horse returned to his stall before the break of day, and had continued this practice some time, without being detected. He adroitly opened the door, by drawing a string fastened to the latch, with his teeth. And, it is said, that on returning to the stable he shut the door: but I am not so credulous as to attribute that to design, but rather to the swing of the door, that closed after him without any effort to make it do so t.

^{*} Related by Miss Sneyd, sister to the late Mrs. Edgeworth.

⁺ This anecdote was related to Dr. M'Donnel of Belfast, by a friend, on whose veracity he could rely,

It came next to the turn of a young lady, to entertain the company on the same subject, who said she was not surprised at the adroitness of the horse in opening the latch, because she had heard of an instance of ingenuity in a cat, very similar. "Some years ago," continued she, "a family in Waterford were alarmed by an outer door belonging to their house being frequently opened without any visible cause. At last, after many surmises, a cat was observed approaching the door, and striving to push it open; but, on finding it shut, she leaped up, put one paw on the handle of the latch, and with the other bent down the trigger till the latch was raised; then she let herself down, and pushed with her head against the door, till it was sufficiently open to admit her. The family to whom this cat belonged saw her repeat the same feat several times *. "Hunger, I suppose," said a gentleman, " was the stimulus to her contrivance. Goldfinches we often see obliged to obtain their drink by drawing up a little bucket, and their seed by lifting up the lid of a box, which, though more common, is equally curious. A friend of mine," continued he, "Mrs. Attersal, of Crab Tree, near Fulham, had a pug-dog,

^{*} Mr. Boswell, of Belfast, can vouch for the truth of this anecdote.

which learned to pull the bell whenever he wanted to be fed." I remarked, that these actions, so contrary to the habits of the animals in a state of nature, ought to be attributed to the power of acquiring new habits from instruction, and associating with man in a domestic state, rather than to instinct. "Your observation," replied the gentleman, "reminds me of a pig, which was brought up by the late Sir Henry Mildmay's gamekeeper, amongst the puppies, at his seat in Hampshire, and, from imitation, learned to point; and afterwards assimilated his manners so much to those of the dogs with whom he had lived, that he became a destroyer of sheep. And, as a further proof of the capacity of different animals to receive new habits from education, I remember a badger at Lord Belmour's, which also points, and accompanies his lordship on his shooting expeditions. He is likewise useful in a way more congenial to his nature: he fishes for his master, and brings the salmon out of the water, without offering to eat them."

This entertaining conversation was concluded by the relation of an affecting incident, that happened some years ago, near Amboy, in the Jerseys, in North America. A child was accustomed, when it got its breakfast, to go beside the decaying trunk of a tree, in the cavity of which which lodged a large black snake. With this reptile the child was observed to divide its breakfast, giving the snake, generally, every third or fourth spoonful of its pottage and milk. The creature, harmless whilst unprovoked, rested its head on its benefactor's knee, looking in her face, and seemingly counting the spoonfuls; but when, by neglect, it did not receive its due share, it then made so free as to attempt to help itself: but for this impertinence it often got a blow with the spoon, and a reprimand. The friends of the child, conceiving that this extraordinary friendship might have dangerous consequences, should a quarrel ensue, prevailed upon the child to entice the snake from its habitation, when they killed it without pity; and, by the same blow might be said to destroy their child, for when she saw the fate of her friend and companion, she wept and lamented so much, that it undermined her health, and brought her to the grave.

Poor child! her sensibility was great. Had she lived to maturity, she would, in all probability, have made a most affectionate wife and mother. Yet, who could blame her parents for their apprehensions of the insidious disposition of her favourite? Who could have divined such an unfortunate result?

My time has passed more agreeably than I expected; but notwithstanding that, I am impatient to return to Woodlands, and my father has consented to do so next week, when I shall hope to find a letter from you.

Your affectionate

EMILY.

LETTER XX.

FROM CAROLINE TO EMILY.

DEAR EMILY,

THE manner of conferring a kindness, shows the delicacy of the benefactor's mind, more than the kindness itself. Patru, a very learned Frenchman, was driven, by poverty, to the mortifying necessity of selling his library. Boileau, the celebrated poet, purchased it; and, under the pretence that he had not room for it at that time, in his own house, suffered it to remain in the hands of the original possessor, as long as he lived. There might, possibly, be many friends who would have presented him with his books; but how few would have done this generous action, without seeking the credit of it, or laying Patru under an obligation. In like manner, Mrs. Saville and my dear Rachel lighten the weight of my dependant situation, by frequent declarations, that their happiness is increased by my company. In return, I endeavour to render myself useful; but my ignorance of domestic affairs incapacitates me from those offices in which Rachel excels. For her wise mother has made a point to instruct her in every branch of family economy. I am her scholar, and though

very awkward in my new business, I hope, whenever we meet, to regale you with puddings and preserves of my own making. It is one of my dear aunt's maxims, that nothing is trivial or mean that is useful; and, that the comfort and order of a family depend very much upon an attention to trifles. No part of her household escapes her observation; and she is desirous that I should acquire these domestic habits, which are so different from my former mode of life, that I should find them an unpleasant task, were it not for the example and condescension of Rachel, who not only instructs me, but also gives me her assistance, and lightens my labours by the pleasures of her conversation.

An elm, near our house, was cut down some time ago, and the sawyers have been this day employed to divide it into planks. Upon cutting it up, they discovered a hollow place, nearly in the centre of the tree, containing a bird's nest, and several eggs, which the saw has unfortunately broken*. It was this nest that Mrs. Saville

^{*} This circumstance happened on the estate of Mr. Parker of Chelmsford, in the year 1897.

wanted to show me. How long it had lain in its recess cannot be known; but, as the yolks of the eggs were not dried up, one would suppose that it could not be a very long period. It is difficult to account for the circumstance altogether. That a bird should choose such an unfavourable situation for her progeny, is contrary to the usual sagacity of those creatures, whose maternal solicitude is so striking; and, that any part of an elm, a slow growing tree, should grow so rapidly as to enclose nest and eggs, before they were destroyed by moisture or insects, is surprising; especially as, from the cavity in which it lay, to the surface of the tree, were four or five inches of solid timber. The fact is certain, though to me inexplicable: I relate it as it hap-Leaving it to your penetration to develope the mystery, I shall fill the remainder of my letter with the history of a pair of eagles, that have taken their abode on the estate of Doctor M'Donnel of Belfast*. This gentleman has a farm at Fair Head; (which is a very remarkable promontory in the north of Ireland, terminated by the greatest basaltic pillars, perhaps, in the world;) these rocks rise perpendicularly from the sea, about five hundred feet, and afford an

^{*} This account was communicated by a friend of Dr. M'Donnel's.

habitation to a pair of eagles, which breed annually in the inaccessible précipice; and their nest has seldom, if ever, been disturbed by man. At a certain time the young eagles disappear, and leave only the two old ones, who seem desirous of holding undivided empire. To what region the young eagles emigrate, is not known. If one of the old ones is shot, another soon appears; so that a solitary bird is seldom seen, and no one ever observed more than two old ones. What seems singular is, that, although there is a considerable quantity of sheep breeding and grazing on the plain below, and that these cagles live on lambs, they never molest them, but carry on their depredations in Rathlin, in Hantine, and the Highland islands. Whether this arises from something noble in the disposition of the bird, sparing or contemning what is immediately in its power, or from the design of reserving the prey that lies so near 'its grasp, for some pressing emergency, must be left to conjecture.

The late Marquis of Antrim obtained one of these eagles, and confined it with a chain. This bird was long domesticated, but was often, from the carelessness of servants, fed on putrid-meat, and sometimes so much neglected, that he became very hungry. When regularly fed, he ate freely, without being disturbed by

the attention of the spectators; but, if he had been long deprived of food, he would never touch the most delicious morsel that was set before him, whilst any person was present. This strange conduct was supposed to arise from an apprehension of being deprived of the food of which he stood in so great need; and, therefore, he always kept himself in a posture of defence and vigilance, to guard it, when of such value, but when it was of less importance, he gratified his appetite without any precaution. From this account it appears, that these birds possess a degree of reflection, that enables them to adapt their conduct to circumstances.

There seems a mixture of reason and instinct, which differs widely from that pure instinct that never deviates from its rule, and is chiefly observed in the inferior orders of animals, such as insects, reptiles, and zoophites. The elephant, the horse, and the dog, are peculiarly intelligent: instinct in them, on many occasions, is subordinate to a mental capacity, approaching to the reasoning powers of man. Could the habits of all creatures be intimately known, it might be easy to trace the gradations from reason to pure instinct; but the fierce inhabitants of the forest, and those that dwell in the depths of the ocean, besides numerous tribes that are driven, by fear, into the remotest solitudes, are secluded

secluded from that notice which is requisite to ascertain the degrees of intelligence bestowed upon them. But, from what is known, it appears, that the superior orders of quadrupeds, and especially those that associate with man, are the most sagacious. Birds also enjoy this privilege very highly, when the protection of their young is concerned. Mr. Galton, in his very entertaining work on birds, remarks, that blackbirds generally build low, in bushes, or in trees that are not very high; and he mentions an instance, of a bird of this species, after having built its nest twice near the bottom of a hedge, and both hatches of its young falling a prey to cats, the third time she placed it in an apple tree, eight feet from the ground. To what can this be attributed, but to the effects of experience and design? Mere instinct teaches finches that build in green hedges, to cover their habitations with green moss; the swallow, or martin, that builds against rocks or houses, to cover hers with clay; and the lark, to collect vegetable straw for the same purpose, as approaching to the colour of stubble, amongst which she builds. But should either of these birds change the colour of the material of their nests, on account of a different situation, I should attribute that alteration to a higher principle, by varying the mode of compliance with the instincts of nature,

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in assimilating the colour of birds nest's to the situation in which they are generally placed; but the deviation from the usual course, would mark a choice, and therefore be superior to the natural impulse that guides the parent bird to build her nest after a peculiar manner.

This subject has insensibly led me further than I intended: it is time to come to a conclusion, and bid you adicu.

CAROLINE.

LETTER XXI.

FROM EMILY TO CAROLINE.

DEAR CAROLINE,

ONE of my favourite amusements is riding on horseback: I have a white poney that carries me most agreeably, and is so tractable, that I am not under the least apprehension when I am upon him. As I have had him for these two years, I am much attached to him; but I shall love him better than ever, since I find that he is capable of friendship; and, what is a still rarer quality, does not shrink from defending his friend, in the hour of danger. My horse is grown extremely fond of a little dog, that lives with him in the same stable, and whenever I ride, the dog runs along by the side of my poney. It happened yesterday, as the groom was leading the poncy out for exercise, that they met a much larger dog, who very violently attacked the diminutive stranger; upon which my horse rose on his hind legs, and, to the astonishment of the groom, so effectually fought his friend's battle with his fore feet, that the aggressor scampered off in a cowardly manner,

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without

without any further attempt to renew the attack*. I reflected on the circumstance, as a very extraordinary instance of deviation from the natural instincts of a horse, and related what had happened, to a circle of friends who had come to dinner. One gentleman paid more attention than the rest, to my narrative, and allowed that, as a voluntary act, it was a very unusual instance of sagacity and affection; but as a horse, in a state of nature, probably fights with his fore feet, it was rather a deviation from his domesticated habits, than from his instincts. The friendship of animals of different species, appears to me very extraordinary, as they can have no natural sympathy with each other; and I suppose that it seldom takes place, except in a domesticated state, in which many examples of it are to be found, even when there is a natural antipathy I have read, somewhere, of a between them. peewit, that was kept tame in a garden, but voluntarily took up its abode in the kitchen during the winter: it associated with a dog and a cat, in the chimney corner, and gradually became so familiar, as to show marks of indignation, if either of them interrupted him when he was washing himself in a basin of water kept for the dog to drink.

^{*} The most Rev. Dr. Plunket, Roman Catholic Bishop of Meath, was witness of this fact.

Miss Seward, of Lichfield, who wrote Memoirs of Dr. Darwin, mentions a favourite cat that had been broken of her propensity to kill birds, and lived several years without molesting a dove, a lark, and a redbreast, that were kept tame, and used to fly about the room, where the cat was daily admitted. The dove frequently sat on pussey's back; and the little birds would peck, fearlessly, from the same plate out of which she was eating.

A gentleman at Belfast*, had a dog that was remarkable for pursuing and destroying birds, when abroad in the fields; but he overcame this propensity so far as to allow a tame quail to run through the house with him, lie before the parlour fire beside him, and when, from longer acquaintance, he had become more familiar, he suffered it to run over him, and seemed to look at it with great complacency, as if pleased that it trusted to his generosity.

Many creatures have carried this friendly disposition much further than mere association; for I have heard of several instances of the young of one race being nourished and protected by a female of a different kind; nay, even when the strongest antipathy naturally subsisted between them. Mr. White, of Selbourne, asserts, that a

cat suckled a hare, which followed her about the garden, and came jumping to her call of affection.

At Elford, near Litchfield, a hare big with young was shot: the young were taken from the mother alive, and the cat, who had just lost her own kittens, carried them away, as was supposed, to eat them; but it appeared afterwards, that she was excited by a different motive, for she suckled and adopted them as her own.

It happened that some humane person, near Plaistow, seeing a puppy struggling in a pond, drew it out half drowned; a cat, with truly maternal solicitude, licked, cleaned, warmed, suckled, and recovered it*.

Polito, in his menagerie, used to show a lion's whelp, that had been brought up by a bitch, who, though much inferior to it in size, acquired authority over it.

Cats seem particularly disposed to adopt the offspring of a stranger; but the most extraordinary instance that I have heard, was related to me by a lady +, who was an eye-witness of the fact. Her cat had a litter of kittens, that were kept in a hamper in the cellar. In order to please her children, she one day went down to see them. On looking into the hamper, she found a young rat amongst the kittens, which she ordered to be

^{*} Related by William Darton.

⁺ Mrs. Bell, of Putney Heath.

taken out. But the next day it was again found, a quiet inhabitant of the same place; and there was no doubt that the cat suckled it, and was disposed to bring it up with her own family.

The Right Hon. George Ogle had a badger suckled by a cat, which had nearly endangered the life of its possessor; for he related the circumstance to Lord Muskerry, who showed marks of unbelief, which Mr. Ogle thought necessary to remove, or resent as an impeachment of his veracity. He therefore sent his servant to Belvue, in the county of Wexford, to fetch the badger, and convey both cat and badger to Lord Muskerry's house in Dublin. His lordship immediately recollected the smile of contempt with which he had listened to Mr. Ogle's recital, and entertained apprehensions of the consequence; expecting that his next visitor would be some friend of Mr. Ogle's, to demand an explanation of his behaviour. He wisely gave a pleasant turn to the affair, by sending to the fish-market for one of the finest turbots that could be got, and regaling the badger with it; he then returned the animal, with this message: "Give my thanks to your master, and tell him, that his badger has feasted upon the best turbot that could this day be purchased in Dublin." Mr. Ogle was well pleased with the welcome his

badger had received, joined in the laugh, and the affair ended happily, which might otherwise have had a serious termination.

In return for your entertaining account of the eagles, I send you some particulars concerning the eels found in the river Ban, in the same part of Ireland, communicated to Mr. Craven, by a a friend who resides in that kingdom. An amazing quantity of food is supplied to the people, by the eels and the salmon of this river, which, at different seasons of the year, constitute a large share of the riches of the country around. The bounty of Providence has so ordered it, that the one migrates to the sea, when the other is prepared to ascend the stream; so that the great lake, and shallow rivers, are always replenished with either the one or the other, as if they occupied their station alternately, by agreement. They assemble to migrate, exactly as birds do, and seem to have the most exact intelligence of the time, and the place of setting out, as well as that to which they direct their course; always returning, with the most unerring certainty, to the same river from which they had emigrated. The eel never attempts to descend until a flood arises, which, besides disturbing the transparency of the water, assists in forwarding the motion of the fish. They never proceed whilst the moon or stars are bright; but choose a dark,

stormy night for their journey. One or two flashes of lightning will put a sudden stop to their advancement, when, in other respects, they are most completely arranged, and in a state of preparation. Numbers of them often gather themselves into a very curious ball, of great magnitude, and rolling down the stream in this order, break through the nets, and all other obstacles which impede their progress. The fishermen being aware of this stratagem, seek for these balls, and after breaking them with poles, catch the cels in their nets, with greater facility. After the parent fish have escaped to the sea, they do not return; but the young cels venture back, and show surprising instances of sagacity, in finding the rivers, and pursuing their track.

Your example, and that of the amiable Rachel, have reconciled me to the retirement of the country. You have taught me to find amusement, where, formerly, my inattention overlooked those objects that now so greatly interest me. Natural history, that I considered as the province of philosophers only, I find, is suited to every capacity; and it needs only to acquire the habit of observation, to find a charm in every plant, and throughout all the tribes of animated nature. Not the minutest fly escapes me unnoticed: a frog, a spider, creatures that I once held in abhorrence.

abhorrence, now afford me entertainment, and daily teach me the sublime lesson, That every part of creation displays striking marks of the wisdom and goodness of the Deity; who has amply provided for the enjoyment, as well as the preservation, of the meanest of his creatures.

The clock has struck eleven: I must retire to rest, after wishing you a good night.

EMILY.

LETTER XXII.

FROM CAROLINE TO EMILY.

MY DEAR EMILY,

NATURE, indeed, opens a delightful book, abounding with novelties at every page, to those who will read in it. The ignorant, the stupid, and the inattentive, equally overlook its beauties:
—those innumerable harmonies, that so loudly proclaim the benevolent designs of Him who has so largely provided for the enjoyments as well as the mere existence of all creatures; has adjusted their form and organs to their instincts; and fitted them exactly to fill up the situation in the material world, in which he has placed them.

St. Pierre has a passage, in his Studies of Nature, so applicable to my subject, that I cannot resist my inclination to quote it *. "Nature has adapted to plants, the smelling, the mouths, the lips, the tongues, the jaws, the teeth, the beaks, the stomachs, the chylification, and the secretions, in a word, the appetites and instincts of animals. Each one chooses that best adapted to its habits and constitution. Thus, the goldfinch frequents

the thistle, because he finds a rampart in its prickly leaves, food in its seeds, and materials for his nest in its down. The bird-fly of Florida, for similar reasons, prefers the vignonia. This is a creeping plant, which finds its way to the tops of the highest trees, and frequently covers the whole trunk. He builds his nest in one of its leaves, which he rolls into the form of a cornet: he finds his food in its red flowers, resembling those of the foxglove, the nectareous glands of which he licks: he plunges his little body into them, which appears, in the heart of the flower, like an emerald set in coral; and he gets in sometimes so far, that he suffers himself to be surprised there and caught."

The same author mentions other examples of these beautiful coincidences: one, in particular, occurs to my memory at this time. "The rhinoceros, an inhabitant of the torrid zone, is clothed with a hide rolled up in several folds. This clumsy animal has the appearance of being invested with a threefold mantle; but being destined to live in the miry morasses of India, where he grubs up, with his horny snout, the long roots of the bamboo, he would have been in danger of sinking, from his enormous weight, had he not been endowed with the strange faculty of extending, by blowing himself up, the multiplied folds of his skin, and of rendering himself himself lighter, in proportion to the space he stands upon *."

The strong digestive powers of the dog's stomach, is another instance of the same harmonious agreement. His appetite teaches him to swallow bones, which, though not ground into powder with his teeth, are presently softened and dissolved by the extraordinary power of the gastric juice of his stomach.

The air-bladder peculiar to fishes, by the dilation or contraction of which they rise or sink at pleasure, enables them to live in an element that would be destructive to most other animals, but which is their destined habitation. Their organs of sight and hearing differ from those of other creatures, but are adapted, in a particular manner, to that medium through which they are obliged to see and hear. Their fins, as artfully contrived for swimming as the wings of birds for flying, display great variety of form, number, situation, and force, according to the habits and wants of their owners. The size and shape of the mouths of fishes would, probably, go far to ascertain the kind of prey they feed upon, as there is no doubt but each is fitted exactly to its purpose. That of the sturgeon is placed under

^{*} Hunter's Translation of St. Pierre's Studies of Nature, vol. i. p. 339.

the head, without teeth, like the opening of a purse, which he has the power of pushing suddenly out, or retracting, as he pleases. Before this mouth, under the beak or nose, hang four tendrils, some inches long, so strongly resembling earth-worms, that his prey is deceived by them, and approaching too near, he seizes and devours it. The teredo, or ship-worm, feeds upon wood, for which its calcareous jaws are admirably adapted. They frequently attack the keels of ships, and force their way so successfully into them, as to endanger their safety. They bore their passage in the direction of the fibres of the wood, and cannot return or pass obliquely, consequently, a knot is fatal to them. Between the years 1731 and 1732, these minute invaders caused great alarm to the inhabitants of the United Provinces, by their numbers, lest they should materially injure the piles that support the banks of Zealand.

Birds that feed on seeds and vegetables, resemble quadrupeds that eat grass, in the number of their stomachs, the length and size of their intestines, and the gentleness of their dispositions: whilst those creatures that prey upon others, whether birds or beasts, are armed with offensive weapons; such as claws, talons, horns, &c.: they are likewise endued with great strength, and a ferocity of temper that is unsocial

social and forbidding. The appetites and the construction of the animal agree together, and mark, in the most striking manner, the design of an Intelligent Being, who has formed each species to fill exactly that place in the universe, where his wisdom has fixed it; and so necessary is every order of creatures, even those we call noxious, to the welfare of the whole, that, were any kind annihilated by accidental circumstances, it would occasion a very injurious deficency. This was experienced by the inhabitants of a certain district in Germany, who were annoyed by a great number of sparrows, that ate their corn. The indignant farmers, determined to get rid of these voracious plunderers, offered a reward for their destruction. The hope of the prize put so many hands to work, that, in a short time, the district was cleared of sparrows. But observe the consequence: the next year they were so overrun with caterpillars, that they were obliged to procure sparrows to devour them. Thus it appears that every link is requisite to complete the chain; that there is nothing superfluous, nothing deficient; but that every part of this wonderful system depends upon each other, and is connected with the rest.

I am led to these reflections, by the sermon Mr. Palmer preached last Sunday, on the goodness of God, displayed in the provision he has

made for the happiness of all creatures, according to their capacities, and the rank they hold in creation; rising from the insect, too minute for our inspection, to man. For our perception does not reach to the higher orders of created beings, whose felicity, doubtless, exceeds our comprehension, as much as their nature is superior to ours. The gift of life, with its appropriate enjoyments, is infinitely diffused. The benevolent Creator has bestowed it upon the innumerable creatures that inhabit our globe, which, though it contains countless millions, is but a minute speck in the universe; since astronomy teaches us, that system upon system rolls in boundless space, at distances that no imagination can comprehend. Nor can the discoveries of man extend to that point where there is a cessation of new worlds. Every improvement in our glasses discovers stars that have escaped the former observations of the most acute astronomers. Since all parts of our globe swarm with animal life, the earth, the water, the air, each abounding in its own peculiar inhabitants, can we hesitate to believe, that the other worlds, that are dispersed in the regions of unlimited space, are likewise peopled with innumerable multitudes of living creatures, all partaking of the bounty of the Universal Father, rejoicing in their being, and, by their existence, displaying

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his goodness? My heart swells with gratitude at the idea; and though it is a task far beyond my powers, to point out the individual instances that are daily before our eyes, yet I cannot resist mentioning a few of those sources of enjoyment that are bestowed upon ourselves, and which every person, who is in the full possession of his senses, is capable of appreciating.

The pleasures of sight delight us from our earliest years; and the whole visible world seems formed to gratify the eye. What beautiful effects are produced by the combination of the seven primary colours, displayed in the various tribes of animals and vegetables that surround us on all sides. From these seven colours proceed innumerable tints and shades, of exquisite beauty, and infinite variety. For our gratification in this particular is consulted, not only by the different hues of green, with which nature distinguishes the classes of trees and plants, but likewise by the variety of hues displayed on the same individual plant: the leaves are of one colour, whilst the stem, or the empalement, are of another. In a similar manner, the parts of the same animal are variously coloured. Birds and insects excel in this respect; especially the latter. The wings of a butterfly, or the corselet off a rase-fly, may probably exhibit the assem-

blage

blage of twenty colours, blended with the skill of an inimitable artist.

The gratification of every other sense is provided for in the same abundant manner. Fragrant odours for the smell, and flavours for the taste. The vicissitudes of winter and summer, spring and autumn, are a source of many pleasures, from the perpetual change that they occa-These are all chiefly corporeal pleasures, and are enjoyed by man, in common with the inferior orders of animals. Man is a being of a mixed nature, and derives his principal satisfaction from sources of a higher kind. The delights peculiar to him are intellectual: the pleasures of remembrance, the anticipations of hope, the pursuits of the understanding, the intercourse of friendship, the consolations of sympathy, the union of satisfaction with the exercise of virtue, especially the social and benevolent virtues; and, above all, the inexpressible recompence of a good conscience. These are the enjoyments bestowed upon us, with many others, by our beneficent Creator, in our present imperfect state of existence, which is only a passage to a more complete state of felicity. If we contemplate our being, and that of creatures below us, in this point of view, the goodness of the great Creator, in the diffusion of happiness,

is most striking, and calls for the unfeigned praise and gratitude of all rational beings.

I have insensibly got into a very grave, but I hope not unwelcome strain, from the impression of Mr. Palmer's eloquence, which, had you been present, would have charmed you.

My letter is protracted to a great length: I leave you to fill up my deficiencies upon the unlimited subject of God's goodness to his creatures, and wish you good night.

CAROLINE.

LETTER XXIII.

FROM EMILY TO CAROLINE.

DEAR CAROLINE,

I was so far from thinking your last letter too serious, that, I can assure you, it rather increased my usual cheerfulness, by the consideration that the whole universe is under the direction of a Being infinitely wise and good. Amongst the multitudes of proofs of his provision for the happiness of man in particular, may be reckoned the superior instinct, or rather sagacity, of some animals, especially dogs, which frequently renders them extremely valuable, and puts them on a level with humble friends. I have lately heard two or three stories that do honour to the canine race; and though they are unconnected with each other, I think they will gratify your taste for such anecdotes, and shall therefore make no further apology for relating them.

A little boy, about two years old, the son of a cottager, was accustomed to go with his parents when they went to work. One day, when their attention was engaged, he strayed to a rocky cliff at no great distance, where, it is supposed, that, being wearied by his endeavours to disentangle

entangle himself from the rocks and briers, he fell asleep, and by that means was overlooked by his parents, who, as soon as they missed him, made diligent search for him, wherever they thought there was a probability of finding him; but all their efforts were fruitless. They had nearly given up the hope of recovering their lost little one, and were on the point of yielding to the terrible necessity of losing him for ever, without knowing his fate, when the dog belonging to the cottage was observed to go out with his food in his mouth; and this unusual act he repeated so often, as to raise a suspicion that he had some extraordinary motive for doing so. Curiosity, and a faint hope that he had discovered what they had so ineffectually sought, determined them to follow him; when, to their inexpressible joy, by tracing his steps, they were led to their child; and, by the time they had got up to him, the dog was found giving the food to the boy, whom he had sustained in this manner for several days *. The attachment, the fidelity, and the sagacity of this animal, are beyond all praise.

The courage of dogs is sometimes surprising. Captain Beaufort, of His Majesty's ship Blisson,

^{*} This circumstance happened in Ireland. A story very similar is related in *The Family Tour*, which occurred to a shepherd in Scotland.

relates an extraordinary instance of that quality, in a dog which was named after the vessel. "It happened," says he, "that a huge whale reared his unwieldy back out of the water, near the ship. Blisson barked: the whale, unused to such an attack, flapped the sea with his monstrous tail. Blisson was in an agony of ardour to be at him. The whale put his nostril to the water's edge, and snorted a river into the air. Blisson could stand that no longer, but jumped into the sea from our quarter-deck, and chased him. Calling and roaring were of no use. Fortunately, the whale thought proper to dive, or my Blisson would have fared worse than Jonah."

Mr. Capel Lofft, of Traston Hall, in Suffolk, had a dog that showed a most affectionate and tractable disposition. This dog was of that kind called by Bewick the elegant terrier. The poor animal had by some chance met with a severe injury, and, in the agony it suffered, took refuge in Mr. Lofft's court-yard. He was from home, and, from the spasms that affected the dog, the family apprehended he was mad. On Mr. Lofft's return, he discovered that the hurt was in the under jaw, and it was two years before it got well. Gratitude for kindness, at a moment when it was so much wanted, seemed to produce the most tender attachment in this dog. Mr. Lofft gained an extraordinary influ-

ence over him, and broke him of his propensity to seize rabbits, and worry cats, merely by the displeasure marked on his countenance, without beating him. When he was most incensed against an unfortunate cat that happened to fall in his way, his master would snatch him up in his arms, and quiet him in an instant. rendered his attachment so strong, that it seemed as if no provocation could induce him to bite Mr. Lofft or the children. A dispute having, on some occasion, arisen between this gentleman and one of his little boys, after proper expostulation he was attempting to put the child out of the room, who made resistance. The dog, seeing the bustle, supposed his master was going to beat the boy, and tried to pull him away by the skirts of his coat, which pleasing action gave such a turn to the contest, as to reconcile the father and son.

The sensibility of this animal was also shown by his great fondness for music. He would sit, for hours, on a chair by the piano, listening to the soft strains of Clementi's or Pleyel's sonatas. And Mr. Lofft adds, that he has frequently seen him beat time with his tail, whilst some favourite airs were playing.

Men and dogs are not the only animals influenced by musical sounds. The horses at the equestrian theatres, which move in measured steps, are all taught by music. And extraordinary stories have been related of the attention of spiders to music, though they have not fallen under the observation of any person with whom I am acquainted.

My next example of canine virtue, if the expression may be allowed, is an historical record, and may have reached you before: if it has not, it will give you pleasure to see how far the animal feelings can approach to the moral virtue peculiar to rational and responsible beings; and what a union of the most affectionate and the most hostile qualities, can exist in the same creature, both springing from a noble, generous disposition. "The fame of an English dog has been deservedly transmitted to posterity, by a monument in basso-relievo, which still remains on the chimney-piece of the grand hall at the castle of Montariis, in France. sculpture, which represents a dog fighting with a champion, is explained by the following narrative. Aubri de Mondidier, a gentleman of family and fortune, travelling alone through the forest of Boudi, was murdered, and buried under a tree. His dog, an English bloodhound, would not quit his master's grave for several days, till at length, compelled by hunger, he proceeded to the house of an intimate friend of his unfortunate master's, at Paris, and, by his melancholy howl-

ing, seemed desirous of expressing the loss they had both sustained. He repeated his cries, ran to the door, looked back to see if any one followed him, returned to his master's friend, pulled him by the sleeve, and, with dumb eloquence, entreated him to go with him. The singularity of the dog's behaviour, added to the circumstance of his coming there without his master, whose faithful companion he had always been, prompted the company to follow the animal, who conducted them to a tree, where he renewed his howl, scratching the earth with his feet, significantly entreating them to search that particular spot. Accordingly, on digging, the body of the unhappy Aubri was found. Some time after, the dog accidentally met the assassin, who is styled, by all the historians who relate this fact, the Chevalier Macairi, when, instantly seizing him by the throat, he was, with great difficulty, compelled to quit his prey. In short, whenever the dog saw the Chevalier, he continued to attack and pursue him with equal fury. Such obstinate virulence in the animal, confined to Macairi alone, appeared very extraordinary, especially to those who at once recollected the dog's remarkable attachment to his master, and several instances in which Macairi's envy and hatred to Mondidier had been conspicuous. Additional circumstances increased sus-

picion,

picion, and at length the affair reached the royal ear. The king (Louis the Eighth) accordingly sent for the dog, who appeared extremely gentle till he perceived Macairi in the midst of several noblemen, when he ran fiercely towards him, growling and attacking him as usual.

"In those rude times, when no positive proof of a crime appeared, an order was issued for a combat between the accuser and the accused. These encounters were denominated the judgment of God, from a persuasion that Heaven would rather work a miracle than suffer innocence to perish with infamy. The king, struck with such an accumulation of circumstantial evidence against Macairi, determined to refer the decision to the chance of battle. In other words, he gave orders for a combat between the chevalier and the dog. The lists were appointed in the Isle of Notre Dame, then an uninclosed, uninhabited place. Macairi's weapon being a great cudgel, the dog had an empty cask allowed for his retreat, to enable him to recover breath. Every thing being prepared, the dog no sooner found himself at liberty than he ran round his adversary, avoiding his blows, and menacing him on every side till his strength was exhausted; then springing forward, he griped him by the throat, threw him on the ground, and obliged him to confess his guilt, in the presence

presence of the king and the whole court. In consequence of which, after a few days the Chevalier was convicted, upon his own acknowledgment, and beheaded on a scaffold in the Isle of Notre Dame. This curious narrative is translated from the Memoires sur les Duels; and is confirmed by many judicious critical writers, particularly Julius Scaliger, and Montfouçon, neither of whom have been regarded as fabricators of idle stories."

The fate of the Chevalier affords not only a striking example of sagacity, nearly approaching to reason, in a dog; but also teaches the impressive lesson, that the conscious guilt of a murderer, disarms the boldest villain from defending himself; and that this horrid crime, however privately committed or artfully concealed, seldom fails of discovery, and often by means the least likely to produce such an effect.

Your faithful friend,

EMILY.

LETTER XXIV.

FROM CAROLINE TO EMILY.

MY DEAR EMILY,

THAT I may make some return for the amusement your canine anecdotes have afforded me, I will relate the feats of a simple dog or two, of low degree, when compared with your heroic avenger of his master's wrongs.

A gentleman, with whom my aunt was formerly acquainted, occupied a farm in a remote district of Scotland, and had a dog of the genuine colly, or shepherd's breed, named Gashkan, which signifies a hero, or, my hero: this dog attached himself to one of the servants employed in the farm, who, being married, was boarded out of the house; but times growing hard, and his master indulgent, William and Gashkan often got a good dinner in the farm-house kitchen; the former by invitation, the latter by permission. Thus, dinner being ready became a matter of consequence to Gashkan, and such was his observation, that he soon learnt to distinguish the signals of preparation. When it was near the time of summoning the servants together, a large pot of broth was set down on the hearth, and along trivet table, usually raised

up to the wall to make room, was let down; then the dairy-maid gave a loud call at the door, which was answered by the servants from the fields, and whilst they were on their way, she made every thing ready for their reception.

The men knew, by the shadows on the mountains, when the time drew near, and if one of them grew impatient, he would say, "Go, Gashkan, see if dinner be ready." Gashkan set off instantly. If, on looking in at the door, he saw the pot on the hearth, and the table let down, he ran back with great alacrity, licked his lips, wagged his tail, and frisked about his master; but if he saw no preparation in the kitchen, he went slowly back, with his tail and ears drooping; and when asked if dinner was ready, slunk sheepishly behind his master. All this the servants understood, as well as if he had delivered a message*.

Mrs. Palmer's eldest sister is settled in America: she has been married several years to a gentleman who cultivates a large tract of land in a remote situation. This mode of life gives her an opportunity of observing the manners of animals in a wild state, and as she is a naturalist, and knows Mr. Palmer's taste, she does not fail to enrich

^{*} Mrs. Grant, author of "Letters from the Mountains," The American Lady," &c. has obligingly furnished me with this, and several other curious anecdotes.

her letters with much information that is novel and interesting. In her last, she gives the history and character of a favourite dog of a mixed breed, whose parents might have been supposed to be a Newfoundland and a colly, had any of the latter kind been in America. "This dog "," says Mrs. Mackenzie, "possessed the most amiable disposition, and was always on the watch to please, which made her a general favourite .-Thus she lived, caressing and caressed. She was very useful in driving cattle off the bounds, and every other kind of service that such animals are accustomed to be employed in, about a farm. The man-servant who lived with Mr. Mackenzie at this time, was of a rough, tyrannical temper, and often treated this fine creature very harshly; sending her to great distances, to save his own trouble, and beating her most severely for every mistake. Her patience and attachment, not withstanding this behaviour, were astonishing.

"After some time she had puppies, of which she was fond beyond expression. The servant being allowed to drown some of the puppies, pretended to understand the permission in a general sense, and destroyed them all. It is supposed, that his motive for this conduct was to prevent her from being detained from following

^{*} I was supplied with this account by Mrs. Grant.

and assisting him. In order to make you acquainted with the detail of her business, it must be premised, that the small extent of cultivated ground on Mr. Mackenzie's farm, was surrounded by a slight fence of wattled touch-wood, which was easily injured. Therefore, the first task in the morning, and the last at night, was to drive the wild cattle and horses from the vicinity, to a great distance in the woods, lest they should break these frail enclosures. Dugald, knowing the docility of his companion, trusted to her exertions for the performance of this duty, without stirring himself from the bounds. When she had driven them away, she would return, and look meekly in his face for approbation; but his usual reward was threats, frowns, and vociferations; upon which she would immediately set out again, and scour the woods, without stopping, till she had driven the objects of her pursuit to an incredible distance. On returning a second time, breathless and exhausted, she would fawn on her tyrant before she lay down to rest, and look up to him, with speaking eyes, for a token of approbation, which, if obtained, transported her with joy. Yet this gentle creature, so docile, patient of injury, and grateful for kindness, would, in defence of her master, and in obedience to his commands, attack the largest animal with courageous alacrity, and seemed insensible insensible of fear, when any duty was to be performed. Miss Mackenzie, who was, at this time, about eleven years old, had several favourite animals, on whom she bestowed much attention; amongst these, Zara and a cat held the first place, of whom you shall hear more in the sequel. For some days after Zara missed her puppies, she went about moaning piteously, and seemed inconsolable. Her young mistress observed, with great concern, that, in addition to her maternal sorrows, this poor dog suffered much from the distension of her teats, which it was not easy to relieve; but being very fond of her, she contrived to press out the milk with her fingers. The grateful dog testified her thanks for this service, by signs and gestures that made speech unneces-Zara had chosen a retreat for depositing her offspring, that, no doubt, appeared to her secure from invaders. A large house, near her master's, had been burnt down: the sunk story remained full of rubbish; and there, in the oven which had belonged to the ruined kitchen, Zara's puppies were lodged.

The cat, who was a great favourite also till she became a mother, when the new duties she had to fulfil made Miss Mackenzie more attentive to her propensities, had kittens much about the same time. The young lady then perceived a degree of levity and cruelty in her cat, that had

had before escaped her observation. She neglected her usual occupation of mouse-catching in the cellar, and lay on the top of the house, watching for bats, all the evening. Not contented with this equivocal game, the bee-catcher, the gentle wren, and even the sacred swallow, were taken and devoured, in the presence of her tender-hearted mistress, who tried every means to correct her voracious disposition. She confined her, she crammed her, and beat her with a dead bird, but still these atrocities were repeated. The appearance of the young family delighted Miss Mackenzie: she now determined to feed her well, and hoped she would assume a more domestic character, and live once more on milk and mice. Every preparation for the comfort of the little strangers was anticipated, and an excellent bed was made ready in the garret; but the cat, suspicious of the officious visits of her mistress, carried her young ones to a high projection near the roof, that had been intended for a pigeon-house. After having conveyed them out of the reach of Miss Mackenzie's kind offices, she would frequently abandon them for a whole day, climbing the tops of high trees in pursuit of wild game; whilst the cries of the little ones distressed her young mistress, as she was unable to afford them any assistance. The only means she had of diverting her chagrin, was in administering relief to poor Zara: but

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this amusement soon failed, for Zara disappeared, except when her services were required. The servants complained of strange noises in the garrets of a night, and the cat totally deserted her post. In this state of affairs, Miss Mackenzie frequently listened to the plaintive cries of the neglected little ones; but all was silent, and she was tormented with the idea that they had perished with hunger, aggravated by self-reproach, for not having borrowed a ladder for their deliverance. Two days afterwards, she saw Zara coming out of the oven, as happy as possible, and observed that she did not come, as usual, to be relieved of her milk: the same thing happened several times, and, at length, curiosity induced Miss Mackenzie, with much difficulty, to descend to her retreat. She found her stretched at length in the great oven, and the five kittens sucking her with all their might; for her teats were so large, that they were obliged to stretch their mouths to the utmost, to effect their purpose. She brought up the whole litter; but whether their disposition was influenced by the nourishment of a foster-mother, is not mentioned."

Was it compassion, or the strong impulse of maternal tenderness, seeking an object to satisfy it, that overcame the instinctive aversion subsisting between dogs and cats. It is also difficult to discover by what means Zara knew that the kittens were lodged in a place to which she was supposed

supposed a total stranger; or, that they were abandoned by their mother; and lastly, how such a large, heavy animal, could mount to so great a height, and convey the helpless creatures down. I can find no solutions to these enigmas: but such was the fact. Your ingenuity may probably account for them. I leave them to your consideration, and shall conclude this letter with one more short anecdote.

A lady who resided in Waterford, was in the constant habit of sending all her servants to a place of public worship, in the afternoon of a Sunday. Orders were given, that the kitchen fire should be made up, and the boiler put on, to heat water for tea. One Sunday afternoon, as the family were sitting in the parlour, a little terrier, that belonged to the youngest daughter, came into the room, barking in an unusual manner, addressing herself, with dumb eloquence, to the mistress of the house, with whom she was seldom familiar. This drew general attention, and excited a degree of alarm: the lady's curiosity being excited, she rose, and followed Fidele, who conducted her to the kitchen, where she found the boiler overturned, and the water streaming about the floor.

I am, with sincere attachment, your

CAROLINE.

LETTER XXV.

FROM EMILY TO CAROLINE.

DEAREST CAROLINE,

Your story of Zara's adopting the kittens, so well authenticated, and so extraordinary, prepares my mind for any instances of adoption, that may be related by persons of credit. The power of finding their way back from vast distances, to a place to which they have been accustomed, which is possessed by various kinds of creatures, is a wonderful faculty, and, in many cases, seems unaccountable; nor do I think that the penetration of man can discover by what sense they are guided. Cats seem to excel in this unknown quality, though it is bestowed, in different degrees, on many other creatures.

Mr. Craven has a cat* that he calls the traveller. It belonged to his brother, who lived at Old Brompton, near London. A friend of this gentleman's, who was then going as master of a vessel to the West Indies, took a liking to this cat. She was given to him as a token of remembrance, and was carried from Old Brompton,

^{*} The owner of this cat was Mr. R. Whitley, who lived at Old Brompton, near London.

through London, put on board the ship, had performed the voyage, and returned to the wharf whence she set out. In all this long peregrination, she did not forget the home that had nourished her, nor the haunts to which she was attached. She took the earliest opportunity of making her escape, and finding her way through the intricate turnings and windings of the metropolis, arrived safe at her former residence, to the great surprise of all the family.

Had you or I been hastily carried, for the first time, through London, we could not have traced back our course, even the next day; whilst this cat must have remembered every turning, at the distant period of many months.

Mr. Craven relates another incident*, very similar to this. He knew a female cat belonging to Mrs. Farquarson, which was removed from Sampford Hall, near Saffron Walden in Essex, to Yosely Bridge in Hampshire, and, impelled by that invincible attachment to places, which is one of the characteristics of the cat kind, returned, as is supposed, through London, to the protection of her kind benefactress at Sampford Hall.

These feats are so far beyond any sagacity that I possess, that I am quite impatient to have my

^{*} On the authority of Mr. Arthur Young.

curiosity resolved upon the subject. Pray tell Mr. Palmer he is my oracle in natural history, and that I request he will explain in what this strange faculty consists.

In imitation of your example, I spend some time every morning in the poultry-yard, which my indulgent father has fitted up in a very complete style, and peopled it with a great variety of domestic fowl, to gratify my taste. Amongst others, I have several wild-fowl that are grown tame: to these I pay particular attention, as I suppose their natural habits less changed than those which have been domesticated for many generations. The same diversity of disposition seems to prevail amongst the inferior classes of animals, as amongst men. Some of the same kind are gentle and timid, whilst others possess a great portion of courage: and I have observed, that there is a kind of common language between the different species of these wild-fowl; for the cry expressive of danger is communicated from one to another, and understood by all. I have a favourite widgeon, so tame that it follows me all over the yard: as I was scattering the corn this morning, a hawk hovered in sight, upon which a common hen gave the scream of terror, and the widgeon perfectly comprehending that an enemy was at hand, fled to me for protection,

tection, and remained crouched close to my feet, till all apprehension of danger was past *.

One of my hens has surprised me very much, as she appears to have acted more from experience than instinct. Before I was aware of her design, the dairy-maid had set her on a clutch of duck-eggs: when they were hatched, she showed the usual anxiety at their going into the water, and made a very attentive, good mother. Her next brood was chickens, which, I suppose, from recollection of the success of her former charge, she immediately led to the water: in consequence of this mistake, they were drowned to

During a few days' stay in London, I went to see the entertainment of the Blood Red Knight, at Astley's Riding Theatre, in which a horse is introduced, that mimicks death so completely, that he suffers himself to be handled and examined, without showing the least voluntary motion, or any symptoms of life or feeling. The docility of this creature, and the skill of his teachers, are truly astonishing; but not more so than that of some elephants, belonging to Rayobah, an Asiatic chief, once in alliance with the English‡.

^{*} Related by Mr. Templeton.

⁺ Mrs. Smith, of Parudon.

[†] Communicated by James Forbes Esq. to whom I owe many obligations, for miscellaneous observations scattered in this work.

The elephants form a necessary and important appendage to a Mahratta camp, and are attended with the greatest care, and fed on the choicest food, even in times of scarcity, particularly when on hard service. Besides their vegetable diet, they are fed with rich balls, called massaulla, composed of spices, sugar, butter, and other expensive ingredients, especially in a camp, where every thing was extravagantly dear. This rich food was necessary both for the elephants and choice Arab horses, in a country every where laid waste and destroyed by the enemy, and affording but little provender. A scarcity of food, therefore, for man and beast, is no uncommon circumstance in warlike expeditions in India. But, however others might suffer from want of daily sustenance, there was an ample allowance for the favourite elephants of the Mahratta sovereign; yet they pined away, and grew emaciated, without any apparent cause. At length the keepers were suspected of defrauding them of their massaulla; as the delicacies in these balls composed likewise the most expensive and savoury parts of the pilaus, curries, and other dishes caten by the Moguls, and too costly for persons in their situation to purchase. The Master of the Elephants, who, like the Master of the Horse in Europe, is generally a man of rank, then appointed inspectors to see them fed, and

the elephants regained their strength, and, for a time, appeared in good condition. But in a few months they fell off again, to the great astonishment of the inspectors, who daily saw them fed, frequently examined the massaulla, and found the ingredients of the best quality. At length the cheat was discovered, and shows the extraordinary influence the keepers had obtained over these docile animals. They taught them, in the inspectors' presence, to receive the balls, and to put them into their mouths with their trunk, but to abstain from eating them: and these tractable creatures actually had that command over themselves, that they received this food, of which they are so remarkably fond, and placed it in their mouths, but never chewed it; and the balls remained untouched, until the inspectors withdrew; they then took them out carefully with their trunks, and presented them to the keepers, accepting such a share only as they were pleased to allow them.

This story was related to me by that cousin of Lord Ormond's, who lately returned from the East Indies, where he has resided many years. His name is Hervey: he is a man of an agreeable person, engaging manners, and great observation. From him I have collected several anecdotes of animal biography, that will entertain you when I have leisure to repeat them. He is a frequent visitor at Belvoir Lodge, and I

am mistaken, if, in spite of Charlotte's ambition, he has not made an impression on her heart that it will be difficult for her to efface. It will be a happy circumstance if this attachment has a beneficial influence in correcting her faults, and improving her character. It is a favourable symptom, that she listens patiently to his friendly hints, though she is indignant towards any body else who takes the liberty of pointing out her faults.

Mr. Hervey had an elephant * of which he was very fond; it had carried him many a long march, and had attached him to it by the sweetness of its disposition. If he wished to enjoy a prospect, he had only to speak, and the elephant remained immoveable till he gave it the signal to proceed. If he had a desire for the ripe mangoes, that grew on the upper branches, it advanced to that part of the tree, and, breaking off the most fruitful bough with his trunk, he offered it to the driver, for the company in his houdah; and if he received any part for his trouble, he accepted it with a profound respect, making a salem, or obeisance, three times, with his trunk raised to the top of his head, in the manner of the oriental salute; and as often did he articulate his thanks by a murmuring noise,

^{*} Mr. Forhes' account of his own elephant.

his mode of expressing his gratitude. When a branch seemed likely to intercept the houdab, he twisted his trunk around it, and, although several feet in circumference, he broke it off with case. This gentle animal was accustomed to visit his master at the tent-door during breakfast, to be treated with a little sugar-candy from his tea-cup; and no spaniel can be more innocently playful, or fonder of those who take notice of him, than this docile animal was.

These creatures are highly valued in the oriental part of the world, both as appendages to royal pomp, and for their many useful qualities in peace and war. In a camp they only carry the thrones and .castles of the sovereign, and his principal officers; and are sometimes kept in rich caparisons, merely for parade. They are a common present among the Asiatic princes and generals of high rank. When properly disciplined, they know their duty, and are as obedient to the word of command, as a rational being. On emergencies, they can travel two hundred miles in forty-eight hours; and will hold out for a considerable time at forty utles a day. Some of the largest of them are from eleven to twelve feet high. They are mostly of a dark grey colour, nearly black; but the face is generally painted with a variety of tints: and the tails and legs of the favourite horses belonging to the wealthy Indians, are dyed of a crimson or orange colour. The elephant bred to war will stand firm against a shower of musket balls, and will never give way unless mortally wounded. Mr. Hervey has seen an elephant * with upwards of thirty bullets lodged in the fleshy part of his body, but perfectly recovered from the wounds. All are not equally docile. When an enraged elephant turns round to retreat, nothing can withstand its fury: the driver has no longer a command, and friends and foes are involved in undistinguished ruin.

Such is Mr. Hervey's account of this noble animal, which, coming from an eye-witness, I thought would be particularly acceptable to you and your Cambrian friends, to whom I desire my regards.

EMILY.

^{*} From Mr. Forbes' account.

LETTER XXVI.

FROM CAROLINE TO EMILY.

DEAR EMILY,

I SHOULD not have written so soon, had not I met with a circumstance that I think worth your notice; as it is a striking confirmation of a pleasing truth that I have long cherished, though without daring to assure myself that the thing existed, as it seems to bring animals too much on a level with human creatures. I am now convinced, that, though the brute creation is not capable of acting virtuously from a principle of duty, and that grand stimulus that man enjoys, of the hope of a future reward, they are, nevertheless, often endowed with virtuous dispositions, such as gratitude, attachment, docility, and other amiable propensities, of which I give you the following example.

A farmer* in our neighbourhood had a bull so wild and ferocious, that he was kept constantly chained, except when led to water, &c. at which time he was never suffered to be out of the hands of a trusty person. This animal

^{*} The facts here related, are taken from the Monthly Magazine, for October, 1810.

seemed to have conceived a particular antipathy against the farmer's brother, who assisted him in his business, and had probably irritated him on some occasion, without being aware of the consequences. He never saw him approach the open shed in which he was kept, without beginning to bellow most dreadfully, which he continued as long as the object of his dislike was in view; at the same time tearing up the earth with his horns, and showing every symptom of the utmost aversion. On two occasions, while leading to water, he very cunningly watched an opportunity, and endeavoured to make a sudden spring out of the hands of his attendant, at his enemy, who was standing in the yard.

Whilst the bull was under the influence of hostility and resentment, one of the most tremendous thunder-storms ever remembered in this country occurred. The lightning resembled sheets of fire, and each flash was instantly succeeded by a thunder-clap, as loud as if a volley of ten thousand cannon had been discharged. The piteous roarings of the bull, during this convulsion of the elements, were quite affecting. Being exposed, in an open shed, to all the fury of the storm, he sent forth, every instant, a yell of terror, hideous beyond description. Imagining that it was the lightning that chiefly alarmed the animal, the farmer proposed to the men servants

servants to go and remove him into the barn, but in vain: they were so much terrified at their own danger, that the roarings of the bull made no impression upon them, nor could any of them be persuaded to move. The farmer's brother, who is a humane, generous young man, undertook the task, facing at once the double danger of the lightning, and the fury of the bull. He accordingly put on his great coat, and went into the yard. The moment he approached the bull, which he found lying, trembling, on his back, having almost torn his chain through the gristle of his nose, in his efforts to get loose, he rose, and, by his fawning actions, expressed the delight he felt at the sight of any thing human, amidst such a scene of terror. Fear had disarmed him of his ferocity: with the utmost quietness he suffered himself to be untied and led to the barn, by the very man whom, a few hours before, he would have torn in pieces, if he could have got at him.

The next morning, as his deliverer was crossing the yard, he remarked that the bull, which had been replaced in his shed, no longer saluted him with his accustomed bellow. It struck him that the animal might remember his kindness to him the night before. He accordingly ventured, by degrees, to approach him; and found that now, so far from showing any dislike to him, he suffered

suffered him, with the utmost gentleness, to scratch his head. And, from that very day, he has continued to him as tame as a lamb; suffering him to play all manner of tricks with him, which no other person about the farm dares attempt, and seeming even to take pleasure in being noticed by him.

A more striking instance of a sudden transition from hatred to affection, can scarcely be found, and one in which the cause was so clearly marked. It was not the change of caprice, but of something like reason, arising from gratitude to a benefactor. A practical lesson may be derived from this anecdote-that even the most savage dispositions may be subdued by gentle treatment; and yet, how seldom it is attempted to manage animals by any thing but harshness. Does this arise from inhumanity, ignorance, thoughtlessness, or the love of tyrannic sway? From each of these causes, I believe; and sorry I am to say, that the same injudicious system is often exercised towards children, whose tender dispositions are changed to perverseness and obstinacy, by the use of the rod. Mrs. Saville often says, that blows never eradicated a vicious propensity: they teach the dear innocents to deceive from fear, but not to correct themselves; and since she has been a parent, she has never been known to have given even a hasty slap.

The amiable character of my dear Rachel is the best proof of the excellence of her sentiments on this subject. The equality of her own temper enables her to govern that of others, without the necessity of recurring to severity. But I have almost lost sight of my original subject—the virtuous disposition of animals. I have already given you an instance of gratitude, I will now entertain you with one of affection.

In the spring of 1803, Miss T. in compliance with the request of a little boy, who had attempted to rear a nest of grey linnets, took the only survivor under her protection. For some days she kept the little bird in her bosom, to supply the warmth of its nest, and fed it frequently with the most delicate and nourishing food; and at night, instead of placing it in a cage, she laid it on the pillow, close to her face, and rose at daybreak to give it food. In short, she accomplished her task by the most assiduous care, and soon had the satisfaction of seeing her little charge able to feed itself, and sit on the perch. This kindness was repaid by the strongest attachment on the part of the bird. Except when he was feeding, he sat continually on her head or her shoulder; and if she left him but for a short time, he would instantly fly to her with expressions of joy, hover round her in ecstacy, and warble to the utmost stretch of his voice:

then

then fly to her lips, and kiss them with transport. In a few months, being obliged to leave Ireland, she offered, though reluctantly, to resign her favourite, which she had named Ariel, to his first owner. The little boy, sensible of the pains she had taken, and the attachment she had formed, generously made her a present of the bird, which she brought with her to England. Ariel continued to show her, every day, if possible, stronger marks of attachment, not unmixed with jealousy; for if she was absent for a day or two, which sometimes unavoidably happened, he appeared dull and discontented, and seldom sang; yet, the moment he heard her voice, or even her step, at a distance, which he distinguished from every other, he would fly to her with delight: but, as if recollecting that she had offended him, he would scold her, which he does whenever any thing displeases or frightens him, and be sullen for a long while, sitting on his perch in a fit of ill-humour. When his anger was abated, he would try to make amends for his displeasure, by kissing her lips, and feeding her with the seeds he had shelled, or throwing up from his maw the food he had previously swallowed, putting it into her mouth with his bill, as if she had been a young bird; then he would settle on her shoulder, and remain there without attempting to regain his liberty, though

she sometimes ventured into the garden with him in that situation. After staying three years in England, Miss T. returned to Ireland, and carried her favourite with her, who is still living, and as fond of his mistress as ever. He is prone to take dislikes to strangers, especially if meanly dressed; and he never fails to testify it, by scolding like a parrot; and when he has once shown symptoms of aversion, nothing can overcome it, but he repeats the same sounds upon the appearance of the person, whom he recognises though in a different dress. He has a great abhorrence of scarlet or full red, and seems terrified at a red coat, a shawl, or a standard of colours*.

This extraordinary account proves that birds are capable of attachment towards particular persons; a quality that renders them as amiable as they are beautiful. In those species that form permanent attachments of the conjugal kind, the instances of affection towards their mates are so striking, and so numerous, that it would be an endless task to particularize them: but I cannot resist mentioning one that happened under my own eye, since I have been in Wales. Mrs. Saville had a pair of beautiful pea-fowls, that were the prime ornaments of her poultry-

^{*} These circumstances were authenticated by a lady of respectable character.

ward, and remarkably fond of each other. It happened, unluckily, that a fox, who had been for some time the depredator of the neighbouring hen-roosts, found his way into our yard, and, in an unguarded moment, seized the poor peahen, and carried her off. The robber, by some accident, being disturbed in his flight, left his prey undevoured, in the hedge at the bottom of the orchard. The body being found, was brought home, and after being honoured by the lamentations of the whole family, was deposited upon the dunghill. In the mean time, the peacock missed his companion, and, with anxious search, paraded about the yard, till at last he discovered her remains, and, no doubt, hoping to cherish her with his warmth, sat down upon them, and continued his post for three days, till, finding all his efforts ineffectual, he at length gave up the attempt.

Dogs have frequently watched by their master's graves, but I know no other example of a bird's maintaining the same constancy after death.

Homer relates that the dog of Ulysses recognised his master, though disguised in the garb of a beggar, and was so overpowered with joy, that he expired at his feet. The incident was probably the creation of the poet's imagination; but he wrought his interesting narrations on the undeviating

undeviating laws of nature, or his immortal works would not have afforded such exquisite delight to so many succeeding generations. Therefore, though uncommon, it is not improbable, that a dog should die through excess of joy at the return of a beloved master, after an absence of several years. As you may prefer the story in verse, I give you the following lines.

"When wise Ulysses, from his native coast, Long kept by wars, and long by tempests tost, Arriv'd at last, poor, old, disguis'd, alone, 'To all his friends, and e'en his queen unknown: In his own palace forc'd to ask his bread, Scorn'd by those slaves his former bounty fed, Forgot of all his own domestic crew, The faithful dog alone his master knew, Unfed, unhous'd, neglected on the clay, Like an old servant, now cashier'd, he lay: And though e'en then expiring on the plain, Touch'd with resentment of ungrateful-man, And longing to behold his ancient lord again, Him when he saw, he rose, and crawl'd to meet, 'Twas all he could, and fawn'd, and kiss'd his feet: Seiz'd with dumb joy, then falling by his side, Own'd his returning lord, look'd up, and died."

The close of evening compels me to terminate my letter, with assurances of undiminished affection.

CAROLINE.

LETTER

LETTER XXVII.

FROM EMILY TO CAROLINE

DEAR CAROLINE,

THE progress of attachment between Mr. Hervey and Charlotte Ormond, is very visible to every observant eye, and has already had a good effect on her disposition and behaviour. He despises the airs of consequence these girls assume, and shows that he hopes she is capable of improvement, by taking every opportunity of correcting and opposing, with charming frankness, her false notions; particularly those relating to the potency of rank, wealth, and fashion, as necessary to happiness. Sometimes he tries raillery, at others, serious argument, and evidently gains ground; for she is not deficient in either good sense, or good temper. But it is a difficult task to part with errors long cherished, especially such as flatter our self-love, and adopt, in their stead, those rational notions that impose restraint and self-denial. Happy is it for Charlotte, that her heart, in spite of pride, has betrayed her into an attachment to a man of sense and virtue, who is not so hoodwinked by love, as to overlook her defects. His principles are too

good to suffer him to deceive her; and he seems anxious to explain to her what she is to expect if ever she becomes his wife. The other day, he enlarged on the pleasures of the home fire-side, and declared, that he could never venture to unite himself with a woman who could not be satisfied with the reality of that description of domestic life, so elegantly pourtrayed by Thomson:

"An elegant sufficiency, content, Retirement, rural quiet, friendship, books, Ease and alternate labour, useful life, Progressive virtue, and approving Heaven."

Charlotte blushed, and looked rather silly: he relieved her embarrassment by saying, that whatever her sentiments had once been, he was sure she no longer thought a title or a coach and four, absolutely essential to enjoyment, and, that at some period not very distant, he hoped he should have the pleasure of making her an admirable wife. The subject was turned off as a jest, but Charlotte was more than usually thoughtful the rest of the day, being well assured it was a serious truth. Miss Ormond is more incorrigible than ever, and not a little mortified at the alteration in her sister, which she terms meanness of spirit. The attentions of an old worn-out debauchee, who has beggared himself at the gaminggaming-table, but is dignified with the title of an earl, tend to increase her hauteur; and so little sensible is she of the true nature of degradation, that she disdains no artifice to allure this antiquated, hungry lover, whose sole adoration is offered to the contents of her purse, but which she attributes to the influence of her personal charms. The old people are equally infatuated, and are delighted with the prospect of having such a noble son-in-law.

Mr. Hervey is often at the Lodge: he takes pleasure in entertaining us with an account of the productions of India, and, as natural history is his favourite study, the instincts or sagacity of the animals, are frequent topics of our conversation. He agrees with you, in thinking, that many individuals of the inferior classes of creation, exhibit virtuous propensities, that render them strikingly amiable. In support of this theory, he told us, that as he was one day shooting, under the cubbeer-burr, a species of grove I will describe hereafter, he chanced to kill a female monkey, and carried it to his tent, which, in a short time, was surrounded by forty or fifty monkeys, who made a great noise, and, in a menacing posture, advanced towards the door. He took up his fowling-piece and presented, upon which they retreated a little, and appeared irresolute; but one, who, from his age and situa-

tion in the van, seemed the head of the troop, stood his ground, chattering and menacing in a furious manner; nor could any efforts with the gun drive him off. He at length came close to the tent door, and finding that his threatenings were of no avail, he began a lamentable moaning, and, by every token of grief and supplication, seemed to beg the body of the deceased. After viewing his distress for some time, it was given to him. He received it with a tender sorrow, and taking it up in his arms, embraced it with conjugal affection, and carried it off to his expecting comrades. The artless behaviour of this poor animal, so powerfully wrought on Mr. Hervey and his companions, that they resolved, in future, never more to level a gun at a monkey *.

The famous banian tree, (Ficus Indica,) called by the Hindoos, cubbeer-burr, is one of the wonders of their country †. A considerable part of this extraordinary tree has been swept away by the high floods of a neighbouring river, but what still remains is near two thousand feet in circumference, measured round the principal stem: the overhanging branches, not yet struck down, cover a much larger space; and under it

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grow

^{*} On the authority of James Forbes, Esq.

^{*} James Forbes, Esq. who relates these particulars from personal inspection.

grow a number of custard apples, and other wild plants. The large trunks of this single tree amount to three hundred and fifty; the smaller stems, forming into stronger supporters, exceed three thousand; and every one of them is casting out smaller branches, and hanging roots, in time to form trunks, and become the parents of a future progeny.

According to the superstition of the Hindoos, the origin of cubbeer-burr is ascribed to one of their saints, who, long ages ago, invoked a blessing from Brahma, on a small sprig of a banian tree, which he stuck into the ground on this spot, and prayed that it might overshadow multitudes. It is, probably, some thousand years old, and the Hindoos behold it with peculiar reverence. Indeed, we cannot be surprised at their affection for these verdant blessings, in the torrid zone. On sacred festivals they repair under the shade of cubbeer-burr, to worship their respective deities, and perform their ablutions in the surrounding stream. This magnificent pavilion is filled with a variety of feathered songsters, peacocks, and other birds; and crowded with whole families of monkeys, whose antics are very diverting; showing their parental affection, by teaching their young to procure their food, and exert themselves, with agility, in jumping from bough to bough, and then taking more extensive

extensive leaps, from tree to tree; encouraging them by caresses when timorous, and menacing, and sometimes beating them, when refractory.

These animals show a curious instinct, in their method of destroying the snakes, which infest these trees: as if fully aware of their malignity, they seize them when asleep, by the neck, and running to the nearest flat stone, grind down the head, by rubbing, it with great force, on the surface; frequently looking at it, and grinning at their progress. When they are convinced that the venomous fangs are destroyed, they toss it to their young ones to play with, and seem to rejoice in the destruction of the common enemy.

The sagacity of the monkey tribe, in a wild state, seems to approach very near to reason: when domesticated, they gain more credit for intelligence than they deserve, from their extraordinary powers of mimicry. Some time ago, a lady of rank * had a present sent her, of a parrot and a monkey, by the same ship. These animals became very sociable and fond of each other. The monkey one day observing the cook pluck a fowl, and thinking that he could perform the same feat, took it into his head to try the experiment upon the poor parrot, and presently stripped her of all her feathers.

The same monkey, after he came to England, happened to see the poultry killed, and was so dexterous a mimic, that, getting into the henhouse, he twisted the necks of a vast number of chickens, in a trice.

I delight in tracing the amiable affections, even in animals, and hope you will collect some more instances of the same nature.

I enclose a paper given me by Mr. Hervey, with a general account of the monkey tribe, that, I think, will afford you a half-hour's amusement.

Your very sincere and affectionate friend,

EMILY.

That class of animals called apes, seems to excite peculiar interest, from the resemblance of their figure to that of man, their capacity of walking upright, and their propensity to imitation. We are apt to attribute to them peculiar sagacity, from their comical tricks; though it seems, that many other animals far excel them, in their wild state, as to their natural habits, and the policy of their communities. Their form, indeed, approaches to ours; yet it is but a hideous resemblance, characteristic of vice and deformity. The satyrs and bacchanals in heathen mythology, were symbols of every inordinate pas-

sion: the model from which they were delineated, was evidently taken from the ape tribe, as may be seen by the strong similitude of the countenances of the one to the other. Nor does the dispositions of these creatures falsify their physiognomy: many species are said to be fierce, ill-natured, malicious, revengeful, thievish, mischievous, and immodest; exhibiting a picture, if it may bear that term, of man in the most debased condition, a slave to vice and his own unrestrained inclinations. Yet these creatures are domestic favourites, and, it must be confessed, that some of the smaller tribes are not always destitute of beauty, if considered as an animal, and not as a counterpart to the noble, intelligent race of mankind. The ribbed-nose baboon, though disgusting in shape, is adorned with a variety of beautiful colours. Its nose is marked with broad ribs on each side, of a fine violet blue colour: a vermilion line begins a little above the eyes, and running down on each side of the nose, spreads to the tip of it. The insides of the ears are blue, which gradually softens to a purple, and terminates in vermilion. The rump is of the same colour; and the beautiful tints on the hips, are gradations from red to blue. The beard is dark at the roots, orange at the middle, and yellow at the ends. But all this finery does not make him amiable, for his manners and disposition

position are odious. The upper part of the body and tail, of the green monkey, are covered with beautiful hair of a fine green colour, which enables the creature to conceal itself amongst the foliage of the trees: the throat, belly, and under side of the limbs, are of a silvery whiteness, which, with its diminutive size, must render it an object of admiration; it being not much above eight inches high, though the tail is eighteen inches long, and, probably, serves it for an arm, by which it clings to the branches of trees.

The orange monkey is nearly the size of a squirrel: its head is round, eyes remarkably lively and brilliant; ears large; the body covered with short, fine hair, of a shining gold colour; and the tail is long.

But the most beautiful of this tribe, is the mico, or fair monkey. Its head is small and round; face and ears of so lively a scarlet, that they look as if they were painted. The long white hair that covers its body, is of a silvery whiteness, which is contrasted by the shining dark chesnut-colour of its long tail. As they diminish in size, and increase in beauty, they appear to lose the ferocious disposition of the larger kinds of baboons, and are gentle, playful, and amusing.

The race is divided, by naturalists, into the three classes of apes, baboons, and monkeys.

Apes have no tails, walk upright, and have a nearer resemblance than their fellows to the human form; having calves to their legs, and their hands and feet shaped nearly in the same manner.

The baboon has a short tail, a long projecting face, sunk eyes, and generally walks on all fours, unless compelled, in a state of servitude, to walk erect. Some of them are as tall, and have as much strength, as the most powerful men. Their propensities and figure are altogether most disgusting.

The monkeys are a more diminutive race: their tails are generally longer than their body, and, in many species, serve, from their flexibility, the purposes of an arm, by which the animal clings with safety to the upper branches of the tallest trees.

However the frolicsome temper of this latter division may introduce them as playthings into our houses, it is most unaccountable that reasonable beings should ever consider them as objects of worship; yet, from the relation of many respectable travellers, it seems an undoubted fact, that in many parts of India, magnificent temples are erected in their honour. In Amadabad, the capital of Guzarat, there are three hospitals for animals, where lame and sick monkeys, or others who find out this luxurious asylum, are fed with dainty fare. It is much to be feared, that

whilst this improper indulgence is superstitiously bestowed upon brutes, that many of the human race, in the same country, languish through want and neglect.

The amusing tricks that are told of the animals of this genus in a state of captivity, though they show their capacity of being taught, and evince their sagacity, yet they do not inform us of their instincts or natural habits: for them, we must have recourse to the accounts of travellers who have visited the torrid zone, where all the species, except the Barbary ape, are found.

From the oran otan to the smaller kinds of monkeys, the varieties are very numerous: their habits, of course, differ according to their species, as it is said that they never mix with each other, but live apart, each kind preserving its own domain. Most of them live in very numerous communities; but the oran otan is a solitary animal, and prefers the most desert places. Though they are frequently six feet high, they are active, strong, and bold: they live on vegetable food, except, occasionally, they meet with shell-fish on the sea-shore. Notwithstanding their size, they are extremely nimble, and chiefly rest in high trees, where they are secure from the attacks of all rapacious creatures, except their insidious enemies the serpents. It is asserted that they construct something like a hut, not only as a shelter

shelter from the heat of the sun, but also as a convenient retreat for the females and their young. They are so courageous as to drive elephants away from their haunts; and defend themselves with sticks, or by throwing stones, when they are enraged. A single man is by no means a match for them. Bosman relates that two negro slaves happened to fall in with several of these dangerous creatures, on the coast of Guinea, when the apes having overpowered them, they were just on the point of pushing out their eyes with sticks, as a party of negroes came up, and rescued them.

On dissecting the oran otan, there are many essential distinctions in the internal formation, from that of a man, though, in some parts, the affinity is so great, that their inferiority can only be attributed to the want of reason, or a deficiency in those intellectual powers that raise the human race above all other creatures. The tongue and the organs of the voice are similar; yet the oran otan is dumb. In the appearance and arrangement of the brain, no difference can be perceived; but the oran otan is irrational. Buffon concludes, from these circumstances, that mind does not depend upon any conformation of matter, but is of a nature superior and independent,

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The residence of wild animals being generally far removed from the habitations of man, it is difficult to trace their instincts; especially of those species that seclude themselves in the recesses of woods and forests, where few ever enter but hunters or wanderers, who are too much engaged in securing themselves against danger, to observe, attentively, the habits of the creatures around them. Some particulars have, however, been collected of different species of the ape genus, which are worth your notice.

The pigmy ape is found in the southern parts of Africa: it lives in woods, and feeds on fruits and insects. If wild beasts attack them, they assemble in troops, and defend themselves by throwing a cloud of sand behind them, which blinds their pursuers, and renders their escape easy. This action shows great sagacity, and appears to be the result of reflection. They act in concert, as is seen from their plundering gardens or plantations in a large body; whilst one of them is always stationed on an eminence as a watchman, to see that no enemy is at hand. If all is safe, he makes it known by a signal that sets them all to work; but if he perceives any one approach, he warns those on the ground to run up the trees. If it is necessary to abandon their project, they will pursue their route, by leaping from tree to tree, till they reach the mountains.

The females, in these flights, are frequently laden with three or four young ones, clinging round their necks and backs; but this burden does not prevent them from making surprising leaps, both as to distance and swiftness.

Tavernier gives an extraordinary instance of the malicious and revengeful disposition of the Barbary ape. As he was travelling with the English president, in the East Indies, they observed a great number of large apes upon the neighbouring trees. The president, amused by an appearance so novel to him, wished to have one shot for a nearer examination, though the natives who attended him represented the danger of exciting their vengeance. In compliance with the president's request, Tavernier, however, brought down a female with her little ones. In an instant, her companions, to the number of sixty, at least, descended in fury, and crowded upon the president's coach; where they would presently have dispatched him, had not the blinds been immediately closed, and the apes beaten off by the numerous attendants. The flesh of this species is eaten by the wild Arabs.

The baboon is very formidable, from its great strength, ferocious disposition, and extreme agility. One of them, at liberty, will easily overcome two or three men, which may be partly attributed to their sharp claws. They store

their food in their cheek pouches. One of themkept in confinement, was known to hide eight eggs at a time in this manner; and when he had a convenient opportunity, he took them out, one at a time, and after breaking them at the end, swallowed them deliberately. They plander gardens and orchards with the same precautions, as the apes, and dexterously fling the fruit from one to another, in order to carry, it off more expeditiously; but if disturbed, they break it to pieces, and cram it into their cheek pouches. At the sight of a man, they run up the trees, chatter, and shake the boughs at him with incredible boldness. The roots of bulbous plants. are one of their favourite repasts: they dig them up, and then peel them with great cleverness, leaving heaps of the outside skin where they have been feasting.

The hare-lipped monkey goes also in troops, and is inexpressibly injurious to the plantations of millet, which they carry off under their arms, and in their mouths. They examine every stalk they pull up, and are so delicate in their choice, that they reject more than they consume.

The Chinese monkey, when fruits are scarce, repairs to the sea-shore, and catches crabs by putting its tail between their pincers, and when they are closed, runs off with its booty, and devours it whenever convenient. It also con-

trives to get at the kernel of the cocoa-nut, but without losing the milk. The natives take the advantage of their fondness for this fruit, by laying some of them, after boring a hole through the shell, near their haunts: the first monkey that finds them, thrusts his paw into one of these holes, in order to get at the kernel, and the people, who are prepared for this circumstance, run up without delay, and seize him before he can disengage himself.

The preacher is the largest of all the American monkeys, being about the size of a fox: great numbers of them inhabit the woods of Brazil and Guiana. They frequently assemble in companies, and placing themselves in a kind of regular order, one of them first begins with a loud tone, which may be heard to a great distance: the rest soon join in full chorus, the most discordant and terrible that can be conceived. On a sudden, they all stop but the first, who closes the assembly with a solo. They live in trees, and leap from bough to bough with surprising agility, catching hold with their hands and tails, as they spring from one branch to another; and maintain their grasp so firmly, that even when shot, they remain fixed till they die.

Serpents are the great enemics to this active tribe, and their agility is a more powerful defence

than a coat of mail; for so conscious are they of its advantages, that some of them will leap backwards and forwards over the snakes, when they are reposing, without discovering the least sign of fear.

Stedman, who wrote an account of Surinam, minutely describes the gambols of the squirrel monkey, called by the natives, keesee-keesee, an elegant little animal, about the size of a rabbit. He saw numbers of them daily passing along the sides of the river, skipping from tree to tree, regularly following each other, like a little army, with their young ones at their backs, which have no unapt resemblance to knapsacks. The leader walks to the extremity of a bough, from which it springs to the end of an opposite one, belonging to the next tree, often at a most astonishing distance, and, with such wonderful activity and precision, that it never misses its aim: the others, one by one, and even the females with their little ones at their backs, which stick fast to the mother, follow their guide, and make the same leap, with equal certainty and ease.

This leads me to mention the extreme affection of the females for their young: they suckle, caress, and cleanse them of the vermin that harbour in their fur; then crouching on their hams, observe their gambols with each other with great delight.

delight. Whilst the little ones are at play, wrestling, throwing each other down, or running after each other, if the dam perceives one of them malicious, or untoward, she springs upon them, and seizing it by the tail with one paw, corrects it severely with the other. Sometimes the delinquent will try to escape, but when got out of reach, as if waiting till its mother's anger had subsided, returns gently, in a wheedling, caressing manner, to avert her displeasure. Sometimes they are all obedient to the first cry she makes as a signal of command, and will follow her, if she goes a gentle pace; but if she has occasion to move swiftly, they mount upon her back, or cling to the fore part of her body. The female, thus loaded, will perform extraordinary feats of agility; and, when tired of her burden, will rub against a tree till the little ones are obliged to descend, when the male takes them up in his turn.

The monkey tribe in America, differs materially from those of the other quarters of the globe, in having neither cheek-pouches, nor callosities, or hardness, on the buttocks. They are divided into two genera, called Sapajous and Sagoins, which are distinguished from each other, by characters peculiar to each. The tail of the sapajou is flexible, having the under part covered, generally, with a smooth, naked skin. The animal

can coil it up or extend it at pleasure; suspend itself by its extremity, from the branches of trees; or use it as a hand, to take hold of any thing it wants. The tail of the sagoin seems adapted to different purposes; being longer than those of the sapajous, straight, flaccid, and entirely covered with hair.

LETTER XXVIII.

FROM CAROLINE TO EMILY.

MY DEAREST EMILY,

This Mr. Hervey seems to be a very reasonable kind of lover. I am highly pleased that he has sufficient influence to awaken Charlotte to pursue the true path to happiness: though much devoted to folly, and dazzled by the glare of a newly-acquired rank, she always possessed that docility of temper which is an excellent basis for improvement, and, in such hands, will, most probably, be the means of rendering her an amiable woman.

Margaret's self-confidence and envious disposition destroy every hope of amendment: the respect paid, in course, to her situation in life, will feed her insatiable pride, which, increasing as she advances in age, will make her insupportable to others, and unhappy in herself. She who thinks herself the object of envy and admiration, claims nothing but pity; for the prospect before her is no better than splendid misery: it offers nothing to satisfy the cravings of a rational mind—no ground for that enjoyment that arises from social pleasure and active benevolence. Mrs. Saville is, comparatively, poor; but she is

happy,

happy, because she covets nothing beyond what she possesses-adds a zest to all she has, by the chcerfulness of her own heart; and seldom suffers a day to pass, without increasing the happiness of some of her neighbours, by her kind offices. I love to accompany her in her village excursions: every eye sparkles at her approach; the little children gather round her with a familiarity that bespeaks their confidence in her condescension and indulgence. She is mostly provided with some little gift, such as nuts or sugar-plums, to foster this attachment, which, by continued kindness, strengthens with their years, and, as they grow up, produces an esteem bordering on veneration. She is far from assuming the stern character of a mere monitor: she shares their pleasures as well as their sorrows, and sometimes joins the festive group, who assemble, on a fine evening, to listen to the harper, Every town in the principality has a musician of this kind, who, when the labour of the day is over, amuses men, women, and children, with his artless strains. If the weather invites them abroad, he takes possession of a bench at the door of the public-house: if wet, he retires to the kitchen, whither his audience presently follow him; and so fond are the Welsh of this instrument, that a harper is thought a necessary appendage to every great family.

Sunday,

Sunday, in our village, is a kind of festival: the cottagers, with their families, attend church twice a day, dressed with peculiar neatness, in their best attire, as is customary with the Welsh on that day; after which, they relax in a pleasant walk or playing with their children. Their manners, in general, are very simple, and their accommodations few, as you will perceive by their mode of washing. In order to save soap, the poor soak their linen in some clear stream, and then belabour it till it is clean, with a heavy piece of wood, shaped like a battledoor, after having laid it on a smooth stone. Coal is supplied by peat-moss, and every cottage is furnished with a stack of this material, for the purpose of fuel. One of the sources from which they derive the means of subsistence, is the abundance of salmon in the rivers of this country. It is not unusual to see the harpooner equipped for his day's work, with a spear, a paddle, and a small, light boat, generally made with osiers, covered either with canvass or leather: with these cheap implements he pursues his course, and often returns home with a valuable spoil. A visit to a salmon-fishery, within a few miles of us, has afforded me great entertainment, being a scene entirely new; but my attention was, in some degree, withdrawn from the main object, by a water-dog, whose art in assisting the fishermen,

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exceeded every thing I ever remember to have seen. As soon as he perceived the men were preparing to cast the net, he instantly ran down the river of his own accord, and took his post in the middle of it, on some shallows, where he could run or swim, as occasion required, and in this position he placed himself, with all the eagerness and attention so strongly marked in a pointer-dog, who sets his game. For some time, I was at a loss to comprehend his design, but the event soon satisfied me, and completely justified the prudence of the animal; for the fish, when they feel the net, always endeavour to make directly out to sea. Accordingly, one of the salmon escaping from the net, rushed down the stream with great velocity, towards the ford, where the dog stood to receive him at an advantage. A very diverting chase now commenced, in which, from the shallowness of the water, we could discern the whole track of the fish, with all its rapid turnings and windings. After a smart pursuit, the dog found himself left considerably behind, in consequence of the water deepening, by which he had been reduced to the necessity of swimming; but, instead of following this desperate game any longer, he readily gave it over, and ran, with all his speed, directly down the river, till he was sure of being again to seaward of the salmon, where he took post as before, in his

his pointer's attitude. Here the fish met him a second time, and a fresh pursuit ensued, in which, after various attempts, the salmon, at last, made its way out to the sea, notwithstanding all the ingenious and vigorous exertions of its pursuer. Though, on this occasion, the dog was unsuccessful, the fisherman assured us, that it was no unusual thing for him to run down his game, and that honest Shag was of very great service to them, by turning the salmon towards the net*.

We did not order our horses till the cool of the evening, and having sufficient time before us, we suffered them to jog on at their own pace, that we might enjoy an extensive view of the ocean, rendered peculiarly majestic by the luminous appearance of its waves. It seemed absolutely on fire: if you have never seen this beautiful phenomenon, I will give you a lively description of it, in the words of Crabbe:

"See, as they float along, th' entangled weeds Slowly approach, upborn on bladdery beads: Wait till they land, and you shall then behold The fiery sparks those tangled Frons' infold, Myriads of living points; the unaided eye Can but the fire, and not the form descry.

^{*} These circumstances are borrowed from Hamilton's Letters concerning the Coast of Antrim, and happened on the river Rush.

And now your view, upon the ocean turn,
And there, the splendour of the waves discern.
Cast but a stone, or strike them with an oar,
And you shall flames within the deep explore;
Or scoop the stream phosphoric as you stand,
And the cold flame shall flash along your hand;
When lost in wonder, you shall walk and gaze
On weeds that sparkle, and on waves that blaze."

Some assert that these brilliant flashes of phosphoric light, that sometimes fringe every wave that rolls towards the shore, are produced by vast quantities of putrid matter, formed by the remains of dead fish; others, with more probability, as I think, attribute this splendid appearance to luminous insects. Leaving the solution of this interesting question to philosophers, I shall close my letter with an instance of gratitude and attachment in an elephant, that Mr. Palmer has read, but he cannot recollect the authority on which it rests, with the hope that it will excite Mr. Hervey to supply us with some more anecdotes of that intelligent animal. A troop of elephants were accustomed to pass a green-stall, in their way to water. The woman who kept the stall, took a fancy to one of these beasts, and frequently regaled her favourite with refuse greens and fruit, which attached him to her. It happened, one day, that they overturned her stall, and in her haste to preserve her goods, she forgot

forgot her little son, who, by this neglect, was exposed to danger. The elephant perceived the child's situation, took it up with his proboscis, and carefully placed it in safety, on a shed near at hand.

How superior in gratitude was this elephant, to many of the human race. Of all the defects of disposition, ingratitude seems the most hateful and depraved: it argues a heart insensible to the best propensities of our nature. That neither of us may ever feel its sting, is the sincere wish of your

CAROLINE.

LETTER XXIX.

FROM EMILY TO CAROLINE.

MY DEAR CAROLINE,

MR. Hervey accepts your challenge, as he thinks that the opportunities he has had of observing animals wholly out of our reach, will enable him to furnish you, frequently, with both amusement and information.

In his opinion*, the sense of smell, in some animals, seems to be connected with certain mental sympathics; as those of hearing and sight are, in all that possess them in any high degree. It has been observed that dogs, though entirely unacquainted with lions, will tremble and shudder at their roar; and an elephant that has never seen a tiger, will, in the same manner, show the strongest symptoms of horror and affright at the smell of it. The late Lord Clive exhibited a combat between two of these animals at Calcutta; but the scent of the tiger had such an effect upon the elephant, that nothing could either force or allure him to go along the road where the cage in which it was enclosed had passed,

^{*} These sentiments, and this relation, are extracted from Mr. Knight's elegant Analysis of Taste.

till a gallon of arrack was given him, when, his horror suddenly turning into fury, he broke down the paling to get at his enemy, and killed him without difficulty.

The excessive eagerness which dogs express in smelling their game, seems, to Mr. Hervey, to be but little connected with the appetite for food, and wholly independent of any preconceived ideas of the objects of their pursuit being fit for it; hence, several kinds of them will not eat the game which they pursue with such wild impetuosity, and of which the scent appears to animate them to ecstacy, far, he thinks, beyond what the mere desire of food could excite. But I cannot help doubting, whether domestication has not perverted that sense, originally given them as a means of directing them to their natural prey, to a different purpose. As a confirmation of his theory, he adds, that where blood has been shed, particularly that of their own species, oxen will assemble, and, upon smelling it, roar and bellow, and show the most manifest symptoms of horror and distress. Yet these symptoms could not arise from any associated ideas of danger or death, since they appear in them that never had any opportunities of acquiring such ideas. They must, therefore, be instinctive, like many other antipathies and propensities, implanted by the hand of Provi-

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dence, as natural guards against danger, or impulses to find nourishment, by these sensations operating upon the passions and mental affections more immediately than it is found to do in the human species, which, enjoying the privilege of reason, stands less in need of such a monitor. Can any thing be more beautiful than such a system!—a provision for every thing necessary, but nothing redundant. The further I examine the capacities and propensities of animals, the more I admire the harmony of their endowments; including their dispositions and outward form, with the necessities peculiar to each. Their mouths, their eyes, their instruments of offence and defence; their forces, habits, and inclinations, are so nicely adapted to the food upon which they are to subsist, the enemies they are to attack or resist, the climate or situation they are to inhabit—that we may clearly see that this curious provision is not contrived for mere existence, but for a high degree of enjoyment. Happiness, in various gradations, seems a universal gift, bestowed by the Creator on all his creatures: man is the only one who, by a misapplication of his talents, perverts the benevolent design, and converts happiness into misery.

But to return from these reflections to Mr. Hervey. He relates a very surprising instance

of the power of man to subdue the most ferocious and blood-thirsty of all animals, the tiger. He says, that some of the Foukeers, or mendicant priests, in many parts of Bengal, keep tigers in a state of domestication. He saw one near Colgony, that appeared under subjection to the Foukeer. This priest lived in a small hut, in the midst of a wilderness infested with tigers. The hut stood on a hill, overlooking the flat country on the opposite side of the Ganges. The Foukeer used to walk, almost daily, to the town, accompanied by the tiger, which seemed to create no alarm amongst the inhabitants, who had perfect confidence in the command the priest had over him *. But Mr. Hervey could not discover by what means this influence was obtained, as it was clearly the interest of the erafty priest to keep his art a secret, that he might retain the veneration of the people, who, doubtless, attributed his power over savage beasts to his sanctity. It could not proceed from attachment to one person, so beautifully displayed in many species of animals, particularly the elephant and the dog; because none but these priests are ever able to tame the fierceness of the tiger, or convert its cruel temper into any thing like friendship, though taken ever so

^{*} Williamson's Oriental Field Sports.

young. It is, therefore, a sort of phenomenon, for which Europeans cannot account. tiger is a beautiful creature, but, like the wasp, whose colours are similar, it bears the marks of malignity in its outward appearance, which serve to deter the spectator from any further acquaintance than a very distant view. Whilst we admire, we dread; and never desire to admit him as an inmate, but in the character of a slave, or a captive confined in a dungeon. How different is the powerful, half-reasoning elephant: he is so useful, intelligent, and amiable, that he is treated with the kindness due to a valuable friend, which he returns with a fidelity and gratitude worthy of man himself. Take the following story as an instance of these qualities.

An elephant, which had been kept tame for some years, got loose during a stormy night, and rambled into his native jungles. Four years had nearly elapsed, when a large drove of these animals were trapped into an enclosure called a keddah. It happened that the keeper of the stray elephant was one, amongst many, that ascended the barricade of timber by which the keddah was surrounded, to inspect the prize they had taken. This man fancied he saw one amongst the new-caught elephants, that bore such a resemblance to his former charge, that he could

could not help suspecting that he had found his long-lost favourite. His comrades laughed at the idea, but no ridicule could deter him from calling it by the name of his old acquaintance; when, to the surprise of all present, the faithful creature acknowledged her former master, obeyed his call, and came towards him, which so overjoyed the man, that, forgetful of danger, he got over the barrier, and the elephant, as if feeling a reciprocal pleasure, laid down for his master to mount. The mohout joyfully bestrode his neck, and, with an exulting air, rode him to his pickets*.

Mr. Hervey having occasion to purchase an elephant, was offered a most majestic one, in point of size, at a very low price; but he declined the bargain, on account of a wound the creature had received in the trunk, from the cruel rashness of its keeper, by which it was greatly disfigured, and entirely disabled from the functions that member usually performs. It hung down, as if incapable of motion, and hadlost the power of suction, or of grasping; consequently, the poor elephant was deprived of the power of procuring his own subsistence, and was wholly dependant on the attention of others. In this pitiable situation, one of its own species,

^{*} Williamson's Oriental Field Sports.

a male elephant, sympathized in its distress, compassionated its sufferings, and constantly prepared for it bunches of grass, fresh leaves, &c. and put them into its mouth *.

Can any thing be more amiable than this conduct, or more similar to an act of reason? for the mere instincts of elephants could not teach them to discern the consequences of their companion's misfortune. Rats are said to show a degree of pity and sagacity nearly equal, in case of one of their community becoming blind: they have been seen to lead the blind rat to drink, by placing a straw in its mouth, and a rat at each end of it guiding their companion to the water.

The sagacity of elephants, it seems, is sometimes employed to seduce, as well as to assist those of their own kind. The females, when properly disciplined, are frequently employed by the mohouts, or keepers, to entrap the wild males; a task that they perform with the address, dexterity, and allurements of a Dalilah. After having completely attracted their admirer, who, like Samson, seems a willing slave, the sly deceiver contrives to amuse and divert the attention of her enamorato, whilst the mohout cautiously exceps, at the risk of his life, between them, and

^{*} Williamson's Oriental Field Sports.

secures his prize, by confining his legs, with strong fetters, to a tree. Nothing can exceed the rage and resentment of the males when they discover the stratagem: their love is turned into the bitterest hatred. They sometimes break loose, and destroy both the mohout and his assistant, whom they seem to perceive was conscious of the delusion. They pursue her with fury, and beat her to death with their trunks. If she can outstrip her pursuer, she returns to her owner, and is ready for another adventure, whenever he chooses to employ her *.

Great preparations are making for the double nuptials, which are to take place in a few days. The one sister has chosen to gratify her pride, the other to seek for happiness: both will attain their point, and will, doubtless, reap the effects of their choice. Charlotte is already greatly altered—so reasonable, so gentle, so compliant with Hervey's taste, that she must make a good wife; whilst Miss Ormond's whole heart seems absorbed by her title, her jewels, and equipages; but not one word of the man: he is lost in the blaze that surrounds him. Indeed, there is but little to commend; neither his person, manners, nor morals, are praiseworthy. How can she approach the altar, and promise to love and

^{*} Williamson's Oriental Field Sports.

bonour such a being? Affection seems to be out of the question on both sides; nay, it is scarcely professed by either. Connexion is avowedly her motive—fortune is supposed to be his. A sad basis for the enjoyment of married life, which surely must depend upon esteem. But this is not a subject for me to discuss; I shall therefore bid you adieu, with renewed assurances of the sincere attachment of your

EMILY.

LETTER XXX.

FROM CAROLINE TO EMILY.

MY DEAR EMILY,

THE fate of the sisters will probably be as different as their choice: the one pursues a phantom, the other a substantial good. Mrs. Saville says, that one principal cause of the misery that prevails in the world, arises from false notions of what constitutes happiness. If I place my enjoyments in a set of jewels, a coach and six, a round of dissipated pleasure, or the admiration of a gaping multitude, I must experience disappointment, because none of these things possess the ingredients of happiness: they may afford me a transient gleam of gratification; but they have nothing durable, nothing substantial, nothing essential in their nature. They can confer no consolation in sickness or sorrow, nor make amends for the want of that self satisfaction, that can only be the result of a consciousness of upright intentions. Few arc better qualified to define what happiness is, than Mrs. Saville; because she enjoys as large a share of it as can fall to the lot of a mortal. The retrospect of her past life, and the animating hope of that which is to come, shed a constant cheerfulness

over her mind, that diffuses itself in benevolence towards others, and is visible in all her actions. The dutiful affection of her daughter, the attachment of her friends, the fidelity of her servant, the love of her neighbours—are the possessions on which she sets the highest value, and secures to herself by her own conduct. A woman with such a taste, has no occasion for wealth, because she is satisfied with those reasonable gratifications, which, though valuable, are not costly. Do not suppose that she is of a gloomy, reserved disposition: she is fond of society, and, by the vivacity and interest of her remarks, forms the chief ornament of that which she frequents. One of her pure pleasures is the assembling of a select circle of friends, amongst whom she never appears to take the lead, though, by the subjects she introduces, and her address in drawing forth the talents of others, she mostly contrives to give an useful turn to the conversation, and direct it to that which is at once agreeable and valuable. You can scarcely imagine the cheerfulness and harmony that prevail in these little parties; but last night our spirits were greatly damped by a gentleman who was in Ireland during the rebellion, the horrors of which, so disgraceful to both sides, he detailed with a minuteness that brought many shocking scenes before before us. Amongst other anecdotes, he told a story so extraordinary, that Mr. Palmer, who is a most rigid exactor of the truth in relating a narration, required his authority. Upon this, he referred to his pocket-book, and found that he had taken it from page 168 of Gordon's History of the Rebellion. I give it you as he read it from his notes.

"The recovery of Charles Davis, of Enniscorthy, a glazier, was remarkable. After having remained four days concealed in the sink of a privy, during which time he had no other sustenance than the raw body of a cock, which had, by accident, alighted on the seat, he fled from this loathsome abode: but was taken at some distance from the town, brought to Vinegar Hill, shot through the body and one of his arms, violently struck in several parts of the head with thrusts of a pike, which, however, penetrated not into the brain, and thrown into a grave on his back, with a heap of earth and stones over him. His faithful dog having scraped away the covering from his face, and cleansed it by licking the blood, he returned to life, after an interment of twelve hours, dreaming that pikemen were going to stab him, and pronouncing the name of Father Roche, by whose interference he hoped to be released.

Some superstitious persons hearing the name, and imagining the man to have been revivified by the favour of heaven, in order that he might receive salvation from the priest, by becoming a Catholic before his final departure, took him from the grave to a house, and treated him with such kind attention that he recovered, and is now living in apparently perfect health."

"The man's restoration, after such treatment, would be absolutely beyond belief," said Mr. Palmer, "were it not attested by an author of credit, who lives within a few miles of him, and seems to speak from personal knowledge. The circumstance of the dog is the least surprising part of the story, as there have been well authenticated instances of similar fidelity." A subject once set agoing, acts like the electric spark, and excites general sympathy. Thus, one story produces another. We were now entertained with the following affecting narrative. "In 1789, when preparations were making at St. Paul's for the reception of His Majesty, a favourite bitch followed its master up the dark stairs of the dome. Here, all at once, it was missing, and calling and whistling were to no purpose. Nine weeks after this, all but two days, some glaziers were at work in the cathedral, and heard, amongst the timbers which support the dome, a faint

a faint noise. Thinking it might be some unfortunate human being, they tied a rope round a boy, and let him down near the place whence the sound came. At the bottom he found a dog lying on its side, the skeleton of another dog, and an old shoe half eaten. The humanity of the boy led him to rescue the animal from its miserable situation; and it was accordingly drawn up, much emaciated, and scarcely able to stand. The workmen placed it in the porch of the church, to die or live, as it might happen. This was about ten o'clock in the morning. Some time after, the dog was seen endeavouring to cross the street at the top of Ludgate Hill; but its weakness was so great, that, unsupported by a wall, he could not accomplish it. The miserable appearance of the dog again excited the compassion of a boy, who carried it over. By the aid of the houses he was enabled to get to Fleet Market, and over two or three narrow crossings, in its way to Holborn Bridge; and about eight o'clock in the evening it reached its master's house in Red Lion Street, Holborn, and laid himself down on the steps, having been ten hours on its journey from St. Paul's to that place. The dog was so much altered, the eyes being sunk in the head as to be scarcely discernible, that the master would not at first encourage

courage his old faithful companion, who, when lost, was supposed to weigh 20lbs. and now only weighed 3lbs. 14oz. The first indication it gave of knowing its master, was by wagging the tail when he mentioned the name of Phillis. For a long time it was unable to eat or drink, and it was kept alive by the sustenance it received from its mistress, who used to feed it with a tea-spoon, and by her care recovered it *."

The length of time this poor creature must have subsisted without food, is surprising; and the efforts it made in such an emaciated condition to reach its master's house, that it might die at his feet, is a striking instance of that unshaken attachment that the canine race show for their protectors. The friendship of a dog for his master, is seldom equalled by that of one man for another. How many friends shrink from their professions in the hour of danger, poverty, and disgrace; but when his services are the most wanted, the faithful dog never flinches from his duty, and numerous are the examples of their sacrificing their own lives in the defence of those to whom they are attached.

Mr. Clarke, who has published his travels through Russia and the Crimea, had a most

^{*} Daniel's Rural Sports, vol. i. p. 28.

affectionate little pug-dog that accompanied him through his long journey, enduring all the vicissitudes of heat, cold, and fatigue, with the most perfect good-humour. "Though naturally afraid of the water," says he, " and always averse from entering it, he crossed all the rivers and lakes of Lapland, Sweden, and Norway, after his masters; and accompanied them three years in different climates, yet detesting bodily exercise; and ultimately performed a journey on foot, keeping up with horses, from Athens, through all Greece, Macedonia, and Thrace: making the tour of the Archipelago, to Constantinople; and thence, in the same manner, through Bulgaria and Wallachia, to Bucharest!" How I should have valued an animal that had followed me so far with such unwearied fidelity; and though he could not articulate his feelings, I should be at no loss to understand his mute eloquence, and would repay it with every mark of favour a dog could enjoy. He should attend me in my walks, partake of my meals, and repose before my fire. Rest and plenty should be his portion for the remainder of his days.

As I was running over some new books, lately sent from London to a gentleman in our neighbourhood, I met with the following passage, which

which records the services of the dog so appropriately, that I shall insert it.

"The faithful dog, the natural friend of man, The unequal federation first began; Aided the hunter in his savage toil, And grateful took the refuse of the spoil; Watch'd round his bed, at sleep's unguarded hour, And drove the hungry tiger from his bow'r. In deeds of death and danger led the way, And bled, unconquer'd, in the doubtful fray: Still fought, though wounded, by his master's side, And pleas'd to save him, grasp'd his prey, and died. As more the bounds of social rights expand, And peaceful herds submit to man's command, Still, as a faithful minister, he shares The shepherd's labours, and divides his cares: Prowls round the hill, or to the allotted plains, The climbing goat, or wandering sheep restrains. With nice discriminating nose inhales The passing odours in the tainted gales; The wolf's approach o'er distant mountains hears, And clamorous barks, and points his list'ning ears, And nearer still, as the fell savage howls, Bristles his wavy back, and fierce defiance growls *."

Rachel has a most faithful dog, of the Newfoundland breed, that always guards us in our walks, and so courageous is he, that we fear no

^{*} Knight, on the Progress of Civil Society.

enemy when he is with us. I see him now from the window, wagging his tail, and showing other marks of joy, which lead me to suppose that he sees Rachel with her bonnet on, waiting for me to set out; I must therefore conclude, with many assurances, that my fidelity and affection to you, equal that of any of the four-legged heroes I have been commemorating.

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LETTER XXXI.

FROM EMILY TO CAROLINE.

DEAR CAROLINE,

My pen has lain dormant for some time, from my engagements with Mr. and Mrs. Hervey. I have been staying several weeks with them, and am greatly pleased with Charlotte's bchaviour as a wife. She is exceedingly attached, and evidently endeavours to take delight in his pursuits, by assimilating her taste to his. Their house is charmingly situated on the banks of a small river, that runs through the grounds; and though it is neither large nor magnificent, it is elegantly neat, and possesses every convenience that can promote order and comfort. They live in a liberal manner, and keep the best company in their neighbourhood; so that they enjoy a sufficient mixture of society and retirement, to give a zest to each other. When we are alone, we generally enjoy our evenings in strolling about the plantations; and as Mr. Hervey is a naturalist, the most minute object furnishes him with a theme to entertain us, especially as he has visited so many climates, that he often illustrates his subjects by an account of what he has seen in other countries.

In one of our rambles along the edge of the river, I perceived something at the bottom of the water which had the appearance of a flower. I remarked it to my companions. Observing it attentively, we found that it consisted of a circular assemblage of minnows: their heads all met in a centre, and their tails diverging at equal distances, and being elevated above their heads, gave them the appearance of a flower half blown. One was longer than the rest, and as often as a straggler came in sight, he quitted his place to pursue him; and having driven him away, he returned to it again, no other minnow offering to take it in his absence. This we saw him do several times. The object that had attached them all, was a dead minnow, which they seemed to be devouring *. How strange! that they should feast on the dead body of one of their own species, and that so much order should be observed in the ceremony. Fishes appear to have less intelligence than quadrupeds or birds; at least, their facility of communication with us is so much less, that we cannot so readily perceive the drift of their actions, as those of the creatures which inhabit the same element as ourselves. Quadrupeds certainly have the superiority above other animals,

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[•] Hayley's life of Cowper, Letter 60th.

man excepted, in the scale of intelligence; yet the elegant form, beautiful plumage, and interesting manners of the various species of birds, have made me so partial to them, that I collect, with pleasure, every anecdote I can obtain of their amiable instincts. Two or three present themselves to my recollection at this moment, which may probably amuse you. The first is extracted from the Buckinghamshire Herald, for Saturday, June 1, 1793, and is as follows:

Glasgow, May 23.

"In a block, or pulley, near the head of the mast of a gabert now lying at the Bromiclaw, there is a chaffinch's nest and four eggs. The nest was built while the vessel lay at Greenock, and was followed hither by both birds. Though the block is occasionally lowered for the inspection of the curious, the birds have not forsaken the nest. The cock, however, visits the nest but seldom, while the hen never leaves it but when she descends to the hulk for food."

What a remarkable instance of maternal love, so deeply implanted by the Great Creator, for the preservation of the infant brood. The poet Cowper was so pleased with the circumstance, that he commemorated it in the following stanzas.

A TALE.

In Scotland's realm, where trees are few,
Nor even shrubs abound;
But where, however bleak the view,
Some better things are found.

For husband there, and wife, may boast
Their union undefil'd;
And false ones are as rare, almost,
As hedge-rows in the wild.

In Scotland's realm, forlorn and bare,
This hist'ry chanc'd of late—
This hist'ry of a wedded pair,
A chaffinch and his mate.

The spring drew near, each felt a breast With genial instinct fill'd;
They pair'd, and only wish'd a nest,
But found not where to build.

The heaths uncover'd, and the moors, Except with snow and sleet! Sea-beaten rocks, and naked shores, Could yield them no retreat.

Long time a breeding place they sought,
'Till both grew vex'd and tir'd;
At length a ship arriving, brought
The good so long desir'd.

A ship!—Could such a restless thing
Afford them place to rest?
Or was the merchant charg'd to bring
The homeless birds a nest?

Hush! silent hearers profit most!

This racer of the sea

Prov'd kinder to them than the coast,

It serv'd them with a tree.

But such a tree! 'twas shaven deal:
The tree they call a mast;
And had a hollow with a wheel,
Through which the tackle pass'd,

Within that cavity aloft,
Their roofless home they fixt;
Form'd with materials neat and soft,
Bents, wool, and feathers mixt.

Four iv'ry eggs soon pave the floor, With russet speck bedight; The vessel weighs—forsakes the shore, And lessens to the sight.

The mother bird is gone to sea,

As she had chang'd her kind;

But goes the mate?—Far wiser, he
Is doubtless left behind.

No!—Soon as from ashore he saw The winged mansion move; He flew to reach it, by a law Of never-failing love. Then perching at his consort's side,
Was briskly borne along;
The billows and the blast defied,
And cheer'd her with a song.

The seaman, with sincere delight, His feather'd shipmate eyes; Scarce less exulting in the sight, Than when he tows a prize.

For seamen much believe in signs,
And from a chance so new,
Each some approaching good divines,
And may his hopes be true!

Hail! honour'd land! a desert, where
Not even birds can hide;
Yet parent of this loving pair,
Whom nothing could divide.

And ye, who rather than resign Your matrimonial plan, Were not afraid to plough the brine, In company with man.

To whose lean country, much disdain We English often show; Yet from a richer, nothing gain, But wantonness and woe.

Be it your fortune, year by year,
The same resource to prove;
And may ye, sometimes landing here,
Instruct us how to love!

The accommodation of these poor birds to necessity, is a striking example of deviation from instinct, under particular circumstances. now relate a curious instance of pure instinct, in which two birds act in concert, and seem necessary to each other, which Mr. Hervey has observed in very distant parts of the world. When he was in Russia, he obtained a curious account of the pelican's mode of fishing, with the assistance of the cormorant. The pelican extends its wings, and troubles the water, while the cormorant, diving to the bottom, drives the fish to the surface; and the pelican continuing the motion of its wings, advances towards the shore, where the fish are taken among the shallows: afterwards, the cormorant, without further ceremony, helps himself out of the pelican's beak *.

To this surprising intelligence between these two birds, he easily gave credit, because he had observed something very similar, in the West Indies, between the sea-pelican and a small seagull. As he was sailing near the island of Tortola, he repeatedly saw sea-pelicans flying over the waves, and plunging into them, as if they had been shot, to catch small fish; and it generally happened, that before the pelican drew his head out of the water, a small sea-gull perched

^{*} Clark's Travels in Russia, &c.

upon its back, and as soon as the fish appeared in sight, snatched it out of the pelican's mouth, and flew away with the spoil *.

The care of the pelican for the preservation of her eggs, is remarkable. They construct their nests of rushes, and line the interior with moss, or any soft herb. These nests are found on the small islets of rivers, and places where moss is in plenty. They lay two white eggs, about the size of those of the swan, and employ the same time in hatching. If disturbed while sitting, they hide their eggs in the water, and take them out afterwards with their bill, when they believe the danger removed. They live altogether on fish, and consume a prodigious quantity †.

Dr. Darwin confirms the accounts already related, of one sea-fowl taking fish from another, by stating, from a traveller named Osbeck, that the man-of-war bird, a species of pelican that is not formed to catch fish, is supported by robbing others, in the manner before described, who are better qualified for the task.

Adanson, in his voyage to Senegal, relates, that on the river Niger, in the way to the island Griel, he saw a great number of pelicans, or

^{*} Sir. Henry Martin, Bart. favoured me with this fact, which he saw as above.

⁺ Clark's Travels.

wide-throats. They moved with great state, like swans, upon the water, and are the largest bird next to the ostrich. The bill of one he killed was upwards of a foot and a half long, and the bag fastened underneath it, held twenty-two pints of water. They swim in flocks, and form a large circle, which they contract afterwards, driving the fish before them with their legs. When they have collected a sufficient quantity of fish within this space, they plunge their bills, wide open, into the water, and shut it again with great quickness: laying up, by this means, a store of fish in their capacious bag, till they have an opportunity of eating it on shore. Here I ought to remark, that this account may not be applicable to every species of pelican, as there are several kinds, that differ from each other in size and habits.

Clavigero relates, in his history of Mexico, that it is a practice amongst the natives, to catch a pelican, and, after breaking its wing, to tie it to a tree, where it is amply supplied with fish by other wild pelicans, who humanely feed their wounded companion. By the time they suppose that his bag is full, these barbarians return to the place, and unmercifully rob him of his treasure.

The spirit of plunder that appears in the cormorant and sca-gull, was observed by Doctor Darwin. Darwin, in two crows also, which followed a hawk till he had caught his prey, and then compelled him to share his prize with them.

The same author relates a most ingenious artifice, used by more than a hundred crows, on the northern coast of Ireland, which marks contrivance, rather than mere instinct. These crows were preying upon muscles, a kind of food by no means usual with them: each crow took up a muscle into the air, twenty or forty yards high, and let it fall on the stones with such force, that the shell was broken, and the helpless fish became an easy prey.

In the superficial view of nature that falls to the common lot, numberless are the instances of wisdom and goodness, that are found in the means with which each creature is furnished, for its own support and preservation—I may say, for its gratification; for there is nothing that has life, so minute or so mean, that is not intended for a degree of happiness, adapted to its power of enjoyment. The poet says: "To enjoy, is to obey." It seems to be a universal law, that, as far as respects rational beings, cannot be perfected without interruptions, till we arrive at that state when there shall be no more vice, sickness, or sorrow—when friends shall never part, or prove faithless.

Adieu, my Caroline,

EMILY.

LETTER XXXII.

FROM CAROLINE TO EMILY.

MY DEAR FRIEND,

THE taste for natural history, that we have both acquired from a residence in the country, seems to have great advantages. To say nothing of the endless variety of amusement it has afforded us, without any mixture of remorse, or misapplication of time, it has led us to trace the wisdom of the Great Ceator, in all his works that have fallen under our observation; for who can observe the harmony between construction and habit, in the animal world, and not adore the "Hand Divine" that formed them? The strength and weapons of each are exactly proportioned to the enemics with which it has to contend: if weak and defenceless, their instincts lead them to avoid danger, by concealment or stratagem. Sometimes the colour of their coats forms their security: insects, and, probably, many birds, are of nearly the same hue as the places they inhabit. The sober plumage of green-finches and linnets, nearly accord with the green leaves and brown branches of trees. Several of the tribes of waterfowl are of a light grey or ash colour, not very dissimilar to that of the sea; and it is well known,

that the Siberian hare, and other inhabitants of northern regions, turn white on the approach of winter, when the ground, for months, is covered with snow. Thus, the same end is attained by different means. If the outside form and colour are thus nicely adapted to the accommodation of the animal, the inside is no less so: its powers of digestion are suited to the food it is to consume: each one has its peculiarities, that harmonize with its own mode of life, and with no other. The same study leads us still further: it instructs us, that not their bodies only, but their dispositions, inclinations, and degree of intelligence, correspond exactly with the situation each creature is to fill, and that more or less sagacity in any of them, so far from increasing their happiness, would disqualify them from performing their respective tasks. The instincts of each tribe, of whatever class, are so nicely contrived, as to promote, in the best possible manner, its preservation and enjoyment, and demonstrate, most powerfully, the design of an all-wise and beneficent Creator, who delights to diffuse happiness to innumerable orders of beings; even to the most minute, and, in our eye, inferior links of that stupendous chain, that reaches from celestial intelligences, to the animalculæ that cannot be perceived without a microscope. The mental powers appear to diminish, in a sort of scale proportioned

proportioned to the rank of the creature that is endowed with them. Man, partaking of the animal nature, though endowed with the noble faculty of reason, is first subject to the influence of instinct. Quadrupeds, after man, are the most intelligent of the lower world, and the most capable of deviating from the instinctive impulse; as is evinced by innumerable well-attested instances of sagacity, that seem to be the result of reflection and experience, in the horse, the dog, and the half-reasoning elephant. One of these occurs to my recollection, and supports my theory so completely, that I must relate it.

The late Hon. General Murray, governor of Quebec, a short time before his death, when become feeble, walking out one morning, in his grounds at Beauport, near Hastings, attended only by a little spaniel, fell, and was unable to rise. The dog immediately ran into the house, barked, and pulled the servants by their clothes; but failing to gain their attention, he ran about till he found a labourer, whom he succeeded in leading to the spot, where the General still lay, unable to rise*. Instinct alone, could never teach him to seek assistance in this manner, to raise up his fallen master.

Birds seem to hold the next rank to quadrupeds; fishes to birds; and lastly, the beautiful,

^{*} Mrs. Davies Giddy.

active, and diminutive race of insects, appear most entirely under the guidance of instinct; but though, perhaps, wholly devoid of any other principle of action, their structure and habits well deserve the attention of the inquisitive mind, which may perceive, in these little creatures, the same wise adaptation of means to a certain design, as in the animals of greater magnitude and more enlarged capacities. Some peculiarities are common to them all: none have less than six . feet, some, many more: they are always furnished with antennæ, which are distinguished from horns by being jointed and flexible, and are supposed to be the organs of some sense of which we are ignorant. The head has neither brain, ears, nor nostrils: most of them have two eyes; spiders have eight. Leuwenhoek discovered eight hundred lenses in a fly; and Pugett, seventeen thousand three hundred and twentyfive, in the cornea of a butterfly. They are furnished with pores on the sides of their bodies. through which they breathe; yet, from microscopic examination, some of them are found to possess several lungs and several hearts. Silkworms have a chain of hearts, as may be plainly seen when they become almost transparent, and are near spinning. Such insects as live in communities, like bees, ants, &c. are of three sexes. Each family of bees has one female only, called the queen, who is the mother of the whole hive;

many males; and a very great number of neuters, or working bees, which provide all necessaries for the young brood, by collecting honey and wax, building up the cells, watching the approach of an enemy, &c. The outside covering of the bodies of insects is often hard, and supplies the place of bones, of which, internally, they are destitute. Another circumstance peculiar to insects is, a change from one state to another: from the egg is hatched the caterpillar or maggot, which is transformed into the chrysalis, from whence proceeds the fly, or perfect insect.

As insects are endowed with the various powers of creeping, flying, and swimming, the air, earth, and water teem with them; and so minute and numerous are they, that scarcely any place is free from them. Trees, shrubs, leaves, and flowers, are the favourite haunts of many kinds; rocks, sands, rivers, lakes, and standing pools, of others; whilst different tribes being appointed to clear our globe from all offensive substances, resort to houses, dark cellars, damp pits, rotten wood, subterranean passages, putrid carcasses, and the dung of animals. These little creatures, so feeble, so diminutive, apparently so insignificant, are, nevertheless, powerful agents to benefit or injure mankind. My ignorance will not suffer me to mention half their uses; but some of them serve for food, others for medicine; some

are important in the arts, and especially to the dissector. The great Ruysch surprised the anatomists of his day, by the nicety of his preparations, which far excelled those of all his competitors. No one could imagine what means he used for this purpose, till he acknowledged that the flesh-maggot was the workman he employed, by suffering it to devour the fleshy parts. In their devastations, they have often destroyed the hopes of the husbandman, and threatened famine to a whole district. Locusts have been known to darken the air, and to devour every green thing, leaving destruction and terror behind them. The white ants in Africa and the West Indies, are very formidable, both abroad, and in the house, as they spare hardly any substance that comes in their way; wood, paper, &c. are devoured with undistinguishing fury. Dr. Darwin remarks, that the small green insect that often covers the stems and leaves of plants, called the aphis, if its innumerable tribes were not thinned by various rapacious enemies, would destroy every kind of vegetable, and starve the whole human race. But, by the wise appointment of an all-discerning Providence, it is so ordered that a balance is preserved: one species serves as a check upon another, and maintains a due proportion.

The minuteness of insects, and the small re-

cesses in which they conceal themselves, withdraw them from our notice, so that the habits of many of them are very imperfectly known; yet there are some particulars so curious and interesting, mentioned by Mr. Palmer, in a lecture on these little creatures, that I long to obtain further knowledge about them, and am beating every bush and shrub, in search of cockchafers, caterpillars, flies, and moths. Could my former acquaintance see me thus employed, how they would ridicule my taste for pursuing such objects as they behold with disgust. But we see with different eyes. A spider would excite, in most of them, abhorrence, if not terror. Reason and habit have so overcome the prejudices of my infancy, that I can look at them, not only without apprehension, but with admiration. What can deserve attention more than a spider's web. How artful its construction! each web being adapted to the place it is to fill. This little artist strengthens those lines that are too weak, by joining others to the middle of them, which she attaches to distant objects. These nets serve two purposes: the first and most obvious is, that of entangling flies, the natural prey of the spider; the other, to supply the want of wings, and convey the insect from place to place. Field spiders being more exposed to the injuries of dews and tempests, construct their nets with more mathematical

matical exactness than the house spiders: with such precision is instinct accommodated to circumstances.

Some spiders have a dwelling, or lodging-place, in the middle of the web, well contrived for warmth, security, or concealment. There is a large spider in South America, which forms nets of so strong a texture, as to entangle small birds, particularly the humming-bird. In Jamaica, there is a species that digs a hole in the earth, obliquely downwards, about three inches in length, and one in width: this cavity the insect lines with a tough, thick web, which, when taken out, resembles a leathern purse. But what is a still greater defence, this house has a door with hinges, like the enclosure of an oyster or a muscle, which is opened and shut when any of the inhabitants go abroad or return home.

Many insects, if they are touched, defend themselves by feigning death: they instantly roll themselves up, or shrink, as it were, from danger, and remain motionless a considerable time. The different species of gall insects produce a nidus for their young; as, the thorny excrescences on briers, the oak-apples, the lumps on leaves of trees, and those on the backs of cows.

The strongest impulse, through all the insect tribes, after satisfying hunger and self-defence, is that of providing for their future progeny; but,

as the existence of the mother, in many kinds, terminates long before the young are hatched, this care cannot be attributed to affection, but to an invariable law, impressed on every individual by the hand of the Creator, for the purpose of preserving the species. Ichneumons display extraordinary sagacity in the disposal of their eggs: they remove them many times in a day, either nearer to the surface of the ground, or deeper below it, according as the heat or moisture of the weather varies. One species of ichneumon fly digs a hole in the earth, and after carrying two or three living caterpillars into it, deposits her eggs there, then nicely closes up the nest with leaves: providing, in this artful manner, as if she had foresight, warmth to hatch her young, and food for their sustenance when brought to life. Some ichneumons lay their eggs in the backs of caterpillars, where their maggot is nourished with that substance that is converted into the silk thread of which the future coccoon is formed.

Insects that go through several transformations, often place their eggs where they may find food of a different nature from that which they themselves consume; for example, butterflies lay their eggs on leaves, though they cat honey; but let it be remembered, that it is a caterpillar, and not a butterfly, that is to proceed from the egg.

Instinct

Instinct teaches animals to accommodate their habits to different climates. Sparrows, even in this country, are said to build their nests without a covering, when placed under shelter, and with one, when exposed to the weather. The small birds of Europe, if in those countries where monkeys abound, change the form of their nests to that of a long purse, suspended at the end of the bough of a tree, to secure their young from the attacks of that animal. In a part of Siam which is subject to inundations, the ants form their settlements on trees: no ants' nests are to be seen any where else.

Thus it appears, that instinct is an unerring guide, teaching her pupils just as much as is necessary for them to know; and likewise an impartial one, for she bestows her gifts equally, on all the individuals of the same species. How different from the genius and intelligence of the human race, amongst whom such minds as those of Newton, Locke, Columbus, &c. exalt their possessors so much above their fellows, that they are like a superior race. But a few more remarkable instances of this impulse, will render my letter more worthy your acceptance.

Wasps are said to catch large spiders, and finding their long legs an impediment, cut them off, and afterwards carry their mutilated bodies, that can no longer escape, to their young. Dr.

Darwin '

Darwin relates, that he saw a wasp on a gravel walk, that had caught a fly nearly as large as himself: he separated the tail and the head from that part of the body to which the wings were attached: after this operation, he took the bodypart in his paws, and rose about two feet from the ground. A gentle breeze wafting the wings of the fly, turned him round in the air, and he settled again with his prey upon the gravel. He then cut off with his month, first one of the wings, and then the other, after which he flew away with it, undisturbed by the wind.

The same author says, that the nymphæ of the water-moths of our rivers, which cover themselves with cases of straw, gravel, and shell, contrive to make their habitations nearly in equilibrium with the water. When too heavy, they enlarge their bulk with a bit of wood or straw; when too light, they add a bit of gravel. The instinctive faculty teaches them, without reasoning, to adjust the weight of their frail dwelling, with that of an equal bulk of water. The case of the wasp and the fly seems less consistent with the uniformity of the operations of those insects.

Insects, in some instances, mistake their instincts. At a certain season of the year, the fireflies in Jamaica are seen in the evenings in great abundance. When they settle on the ground, the bull-frog greedily devours them; which has probably

probaby suggested the idea of destroying those animals, by throwing red-hot pieces of charcoal towards them, in the dusk, when they leap at them, and hastily swallowing them, are destroyed. In like manner, the putrid smell of the stapelia, or carrion-flower, allures the large flesh-fly to deposit her eggs in its beautiful petals, where the young worms, when hatched, perish for want of nourishment.

Long-legs, moths, and many kinds of flies, mistake the light of a candle for the rays of the sun, and rush into the flame, to their destruction.

In the three last examples, the intention is perverted from accident; but it is the consequence of that invariable law bestowed for their preservation.

These are a few of the innumerable displays of Divine wisdom and goodness, in the various classes of the minute tribes of insects; but they are sufficient to induce you to acquaint yourself with more; and my letter is already so long, that I shall only add, that I am, with unalterable friendship, yours,

CAROLINE.

LETTER XXXIII.

FROM EMILY TO CAROLINE.

Believe, dear Caroline, that your last letter afforded me much entertainment, and has excited my curiosity to examine for myself into the wonders of the insect world. I have bought a microscope, and am already surprised at the beauty of many of those tiny creatures, that I have so often overlooked as ugly or insignificant. I would begin to make a collection of them, but I cannot resolve to put them to death merely for my pleasure. I abhor the idea of inflicting pain, or taking away life from any creature, wantonly; and it often astonishes me to see some people, otherwise humane, stamp upon a spider or a beetle without repugnance. Women are more tender-hearted than men, which may partly be attributed to a wise provision of nature, to qualify them for the maternal office. But they are also indebted to education: cruelty is discouraged in girls as unamiable, and discordant with their natural character; so that an affectation of great sensibility has, of late years, been very fashionable. Boys, on the contrary, from false notions of courage and spirit, are suffered to take birds' nests, to tyrannize over horses,

and dogs, &c. till their feelings are blunted to a degree that influences their conduct the rest of their lives. This prevails most where there is least cultivation; consequently, we see animals treated with the most unfeeling barbarity by butchers, fishmongers, poulterers, draymen, cattle-drivers, &c. But can we expect reformation, whilst those who should know better, buy crimped fish, and deal with poulterers who pluck their fowls before they are dead, which is a common practice, because it is done with less trouble? The lesson of humanity to every thing that breathes, should be taught from the very dawn of reason, and repeated on every occasion of enforcing it. Angling with worms, birds'nesting, and spinning cockchafers, are, by the unthinking, overlooked in their children as the common amusements of their age; but they harden the heart, and sow the seeds of a cruel disposition, that is often exercised towards wives, children, and servants.

My warmth on this subject is probably increased, by the severe discipline of a horse-breaker to a colt of my father's. I remonstrated day after day, but could gain no attention, or any other reply, than "it was necessary to bring him to obedience." Mr. Craven happened to call at this time: I renewed the subject, hoping that he would unite with me in entreating compassion

compassion towards the poor colt. Instead of this, he said he did not know how it could be avoided, unless we were in possession of the secret of James Sullivan, who had the art of subduing the most ferocious horse in a very extraordinary manner. Seeing my curiosity was excited, he proceeded as follows:

"James Sullivan, Madam, was a native of the county of Cork, and an awkward, ignorant rustic, of the lowest class, generally known by the appellation of the Whisperer, and his profession was horse-breaking. The credulity of the vulgar bestowed that epithet upon him, from an opinion that he communicated his wishes to the animal by means of a whisper; and the singularity of his method gave some colour to this superstitious belief. As far as the sphere of his control extended, the boast of veni, vidi, vici, was more justly claimed by James Sullivan, than by Cæsar, or even Bonaparte himself. How his art was acquired, or in what it consisted, is likely to remain for ever unknown, as he has lately left the world without divulging His son, who follows the same occupation, possesses but a small portion of the art, having either never learned its true secret, or being incapable of putting it in practice. The wonder of his skill consisted in the short time requisite to accomplish his design, which was performed

performed in private, and without any apparent means of coercion. Every description of horse, or even mule, whether previously broke or unhandled, whatever their peculiar vices or ill habits might have been, submitted, without show of resistance, to the magical influence of his art, and, in the short space of half an hour, became gentle and tractable. The effect, though instantaneously produced, was generally durable. Though more submissive to him than to others, yet they seemed to have acquired a docility unknown before. When sent for to tame a vicious beast, he directed the stable, in which he and the object of the experiment were placed, to be shut, with orders not to open the door until a signal given. After a tête à tête between him and the horse, for about half an hour, during which, little or no bustle was heard, the signal was made, and, upon opening the door, the horse was seen lying down, and the man by his side, playing familiarly with him, like a child with a puppy-dog. From that time he was found perfectly willing to submit to any discipline, however repugnant to his nature before. I once saw his skill tried on a horse, which could never before be brought to stand for a smith to shoe him. The day after Sullivan's half-hour lecture, I went, not without some incredulity, to the smith's shop, with many 02

other

other curious spectators, where we were eyewitnesses of the complete success of his art. This, too, had been a troop horse; and it was supposed, not without reason, that, after regimental discipline had failed, no other would be found availing. I observed that the animal seemed afraid whenever Sullivan either spoke or looked at him: how that extraordinary ascendency could have been obtained, it is difficult to conjecture. In common cases, this mysterious preparation was unnecessary. He seemed to possess an instinctive power of inspiring awe, the result, perhaps, of a natural intrepidity, in which, I believe, a great part of his art consisted; though the circumstance of the tête à tête shows that, upon particular occasions, something more must have been added to it. A faculty like this would, in other hands, have made a fortune, and great offers have been made to him for the exercise of his art abroad; but hunting, and attachment to his native soil, were his ruling passions. He lived at home, in the style most agreeable to his disposition, and nothing could induce him to quit Duhallow and the fox-hounds *."

^{*} Rev. Horatio Townsend's Survey of the County of Cork. This gentleman remarks, that though the above facts appear almost incredible, they are nevertheless indubitably true, and he was an eye-witness of their truth. P. 438.

When Mr. Craven had come to the termination of his story, my father, who is rather incredulous, cried out: "Well, Craven, there are many unaccountable things that are true; but I would not have believed this, if you had not seen it yourself."

From Sullivan, and his wonderful powers, the conversation turned upon the sagacity of horses. In a wild state they live in troops, and when hunted by the Tartars, set watches to prevent being surprised, and have commanders, who direct and hasten their flight. In this country, in a domesticated state, when several horses travel in a line, the first always points his ears forward, and the last points his backward; whilst the intermediate ones appear to be quite carcless in this respect, as if they trusted to the vigilance of their companions at each end of the line, to listen to any sound of danger, either behind or before. Is this instinct, or a preconcerted measure?

There are some parts of a horse which he cannot reach to rub when they itch, particularly about the shoulder, which he can neither bite with his teeth, nor scratch with his hind foot. When this part itches, he goes to another horse, and gently bites him in the part which he wishes to be bitten; a kind office that is immediately performed by his intelligent companion. An attentive

attentive observer of nature* once remarked a young foal bite its mother for this purpose. The mare did not choose to drop the grass she had in her mouth, and, instead of biting it, merely rubbed her nose against the foal's neck; from whence he inferred, that it was reflection, rather than instinct, that taught her to rub where she was bitten.

In the extensive moorlands of Staffordshire, the horses stamp upon the gorze furze with their fore feet, in order to break the points of their thorns, which renders it convenient to eat; whereas, in more fertile parts of the country, horses take no such precaution, from want of experience, as it appears, but when they attempt to feed on this shrub, prick themselves till their mouths bleed.

Next to the elephant, I think the horse the most noble, generous, useful creature, that man renders subservient to his will, though, perhaps, a Laplander would prefer the rein-deer, or an Arab the camel; but I am not so well acquainted with their dispositions, though I acknowledge their usefulness in their respective countries.

Of all domestic animals, swine are the least pleasing; yet Mr. Craven assures me that we are apt to regard them as stupid, merely from the forbidding appearance of their exterior form, and their disagreeable habits of wallowing in the mire, and eating any kind of food without discrimination. He says that they have more intellect than is generally supposed: that nature has bestowed on them a sense of touch, as well as smell, at the end of the nose, which they use as we do our hands, both to root up the soil, and to examine any thing eatable that comes in their way. In our uncertain climate, experience teaches them to collect straw in their mouths, to make their nest, when the wind blows cold, and to assemble their companions, by repeated calls, to assist in the work, and add to their warmth by lying close together.

Mr. Craven finished his vindication of the swinish race, by the following ancests of all American sow. This animal passed her days in the woods, with a numerous litter of pigs; but returned regularly to the house in the evening, to share with her family a substantial supper. One of her pigs was, however, quietly slipt away to be roasted: in a day or two afterwards, another; and then a third. It would appear that this careful mother knew the number of her offspring, and missed those that were taken from her; for after this, she came alone to her evening meal. This occurring repeatedly, she was watched coming out of the wood.

wood, and observed to drive back her pigs from its extremity, grunting with much earnestness, in a manner so intelligible, that they retired at her command, and waited patiently for her return. It is evident that creatures far excelling the swine in sagacity, do not appear to miss an inferior number of their young, or take any precautions for their safety.

The two married couple proceed as might be expected. Charlotte Hervey is happy, and daily improving in her character: she no longer thinks the country dull, or sighs for a round of company. Her time is well filled up in domestic duties; and in cultivating her mind, that she may please her husband, and qualify herself for his companion. Nor is she wholly inattentive to the mant of the poor, though she is not yet a Mrs. Saville:-she wants resolution to visit their ill-accommodated dwellings, and see the misery that is too often concealed under their roofs. A sick bed is too melancholy an object for her sensibility; but as she grows less selfish, I trust she will sympathize more with others, and be willing to subdue her own feelings, that she may afford consolation where it is wanted. Her sister and her lord live in a very hostile manner: their disputes have already run very high. She finds he is greatly in debt, and that her fortune must go to satisfy his creditors. He continues

continues to lead a life of profligacy, and treats her with no attention, but rather with contempt, as one he submitted to marry for the sake of her purse. Her ungoverned temper cannot bear this neglect: she flies to dissipation for comfort, but finds none. Both game;—each reproaches the other, till indifference degenerates into hatred. Separation is proposed, and will probably be adopted. Can a title make amends for all this misery? Her haughty spirit will not suffer her to acknowledge that grandeur is no compensation for happiness; yet it does not require an eagle's eye to discern the traces of wretchedness in her countenance.

It is said that the estates of Mr. Campbell, in the West Indies have sold for a much larger sum than was expected, and that his affairs bear a very favourable aspect. How sincerely should I rejoice, were he able to repay your fortune, and recal you from your long banishment from your most affectionate friend,

EMILY.

LETTER XXXIV.

FROM CAROLINE TO EMILY.

DEAR EMILY,

THE report you heard of Mr. Campbell's prosperity is true. Several things, besides the advantageous sale of his West Indian property, have contributed to make him, once more, a man of fortune; particularly the death of his eldest brother, who, being a rich bachelor, has left him a considerable sum of money. These circumstances, uniting with his own exertions and skill in business, have reinstated his affairs, and enabled him to repay me what is my due. I had a letter from him last week, in which he informs me of these particulars, and, in the kindest manner, invites me to return to his house, where he assures me I shall always find an affectionate home. This proposal I cannot accept, though I feel very grateful for that, and many former marks of paternal regard. Yet the sacrifice would be too great. The alteration in my taste and habits, has unfitted me for a town life; and my attachment to Mrs. Saville is so great, I would not quit her for the wealth of India, especially as she will shortly be deprived of the society of her dear Rachel, who is on the point of giving her hand

hand to Mr. Henry Palmer. The match is very agreeable to Mrs. Saville, but Rachel will live at twenty miles' distance. I shall be a poor substitute for such a daughter; yet every thing that tenderness, respect, and filial affection can inspire, I shall fulfil, as the most delightful task of my life. The sense of pecuniary obligation has long been the only allay to my enjoyment: this unexpected change of circumstances relieves me from this uneasiness, and enables me to render Mrs. Saville's situation affluent. I have no other pleasure in riches, but sharing them with these dear friends. I am under the necessity of coming to London, to take possession of my property, but shall wait till the marriage is over, when my aunt and cousins will accompany me. It will not be more than a fortnight before I shall be with you; of course, our correspondence will cease till my return, when we must once more be contented with this kind of communication, unless you will be induced to try the retirement of a Welsh cottage, and take up your abode with us for a few months; a proposal that I hope you will not refuse. But I believe you will be easily persuaded to accept it, when you are acquainted with my Cambrian friends. I shall then enjoy as much felicity as is to be found, when surrounded by all I love best; and already anticipate the delightful rides, walks, and conversations, we shall shall have together. Our friends, the Palmers, will join our society, and complete our intellectual entertainment.

As instinct has so long been my theme, I shall terminate our correspondence with some remarks* on that subject, by Mr. Palmer, which are the result of observation, and have afforded me much gratification. It is matter of curious speculation, to consider how the instinct of animals grows weaker, in proportion to their closer approximation towards mankind and their dwellings.

The beaver, the carcasou, and many other animals in their entire savage state, when seldom approached by human beings, seem to have the dominion of the wild, and to exercise a degree of forethought and wisdom, both in procuring what is necessary, and in avoiding what is dangerous, that appears incredible to those, who, living in a cultivated country, have no means of tracing the progress of this wonderful sagacity. The cause of this faculty becoming more obtuse, when animals are, to a certain degree, associated with man, when they enjoy his protection and inhabit his domains, is sufficiently obvious. Nature, both liberal and frugal, always does enough to obtain her purpose, but resumes her gifts when no longer useful. This applies particularly

^{*} I am indebted to Mrs, Grant for these remarks.

to those animals which we merely protect and fatten, without expecting from them any services that require a recollection of the past, anticipation of the future, or, in short, any exercise of those powers which do not, like instinct, operate uniformly, but are rather a kind of borrowed light from the rational powers of the thinking and governing nature. Kine, for instance, in a wild state, possess an acuteness, both of sight and smell, and a spirit and fierceness in defending their young, which entirely disappears when, by domestication, we have reduced them to a condition in which the former of these qualities would be of no value, and the latter, dangerous to themselves and others. In their wild state, they distinguish by the smell, the grass where the footsteps of man are to be traced, and particularly that where any person has sat or lain, with symptoms of the utmost rage and horror.

This degradation of the natural instincts, is apparent in sheep, goats, fowls, &c. In horses and dogs too, they are much diminished; but here is a wonderful substitute provided, in that borrowed light formerly mentioned. It is not to feed upon them, but to make their strength, their diligence, their sagacity and attachment, subservient to various important purposes, that we tame and teach those generous and affectionate animals. And here I must pause, to observe the

wise order of Providence, in setting certain limits to the dominion of man, over the subordinate creatures. Those which, from their habits or the peculiar conformation of their bodies, are not fitted to love us, or labour in our service, as the dog and the horse, or to clothe or feed us, as kine, sheep, and poultry, resist all our efforts to domesticate them, by refusing to continue their species in that state of imprisonment and degradation to which we would subject them. those whom their nature and instincts peculiarly fit for consuming the waste fertility of the untrodden forests, or for pursuing their prey where the hot and enervating climate might sink the inhabitants into unmanly softness, without such an enemy to stimulate their courage and prompt their vigilance; such animals refuse the yoke of subjection, and, in confinement, their instinct decays, or appears in some mode useless to themselves, and pernicious to others, of which many instances might be given.

The beaver, in particular, in his native state, is superior in forethought, and something like intelligence, to every inhabitant of the wild. He is politic, vigilant, social, and, one might almost add, patriotic, when his incessant labours for the public good are considered. He is most industrious, and most versatile in the modes of his industry; being, by turns, a labourer, a wood-cutter,

wood-cutter, a plasterer, a house-builder, and a frugal and provident caterer: he is a centinel too, occasionally; and, in self-defence, a soldier. No difficulties discourage, no toils exhaust him : patient and indefatigable beyond all example, he sees the labour of years, those immense trees which have been formed into barriers seemingly immoveable, by the incredible strength and unwearied exertions of the whole community; he sees these monuments of his toil swept away by the floods, and instantly begins, with renewed and undaunted activity, to repeat, for the same purpose, the same labours. Behold this powerful artificer in a state of captivity: (for that cannot be termed subjection, where there is neither obedience nor docility:) no creature can be more awkward or unsightly, or seemingly less adapted to serve or to please. Those strong, short legs, and that sideling gait, which were so well adapted for assisting his associates in dragging the trees they had previously felled, make him appear more ungainly than can be easily conceived. The trowel tail seems to drag on the ground, as a useless incumbrance; and, from its flat, broad form, and naked surface, suggests the idea of something amphibious. Thus odd and unpleasing in its appearance, its habits are not more captivating. The fine instinct which exalts it in a wild state above other animals, seems degraded

or perverted. The only distinction it shows its master, is forbearing to bite him, which it is very ready to do to strangers. It will follow him in the uncouth manner I have described, and, from the habit of ceaseless industry that it has acquired in a state of liberty, works, except in the depth of winter, the whole night long. When wild, it collects food in the day, and cuts and drags wood in the night. When tamed, which can only be done by taking it whilst very young, it is necessary, on account of its restlessness, to leave it out in the yard. There it employs itself the whole night, in carrying fire-wood from the pile, and blocking up the door with it. So that when the family rise in the morning, they find themselves barricaded with a quantity of wood, that takes no small time to remove.

From what has been already said, it appears that the sagacity of animals is in its highest perfection, in the two extremes of utter estrangement from man, or that intimate familiarity with him which results partly from sharing his pursuits and occupations. In the former case, being entirely unaided and unprotected by human power and intelligence, more sagacity is requisite to provide for its wants, and shun or conquer its enemies. In the latter, while receiving kindness, and a sort of culture from his master, the reciprocation of good offices, as well as the similarity

of pursuits, in which the dog and horse, for instance, are associated with the shepherd and the hunter, seems to enlighten the former with a ray of human reason, and warm them with a degree of human affections. It is in that intermediate state, when the animal has lost the wild freedom of the forest, - when it is become the slave of man, without acquiring the privilege of being his friend and companion-that instinct languishes, without being replaced or improved by that borrowed beam from human intelligence, to which I have so often alluded. Man, born lord of the inferior creatures, with powers to conquer the strong and circumvent the subtle, is himself an example of this interregnum. That languid, enfeebled state of the faculties, when neither stimulated by necessity, as in a state of unrestrained freedom and independence, nor cultivated by superior intelligence, when relieved from the pressure of the former condition. The savage, when beaver or the bee, he forms part of a communitybuilds a habitation, and provides for future wants. In this period of advancement, the savage, whose life of perpetual exigencies keeps all his inferior faculties in continual exercise; who knows no restraint, hopes for nothing but what he can easily attain, and fears no enemy but such as he is accustomed to subdue; such

a savage, though his rational powers cannot be said to be unfolded—though he has not attained to the privileges, or assumed the dignity of which reasoning man is capable—is still a noble animal, in comparison with the enslaved and unenlightened peasants, who groan, in many parts of the world, under the iron hand of oppression; without being visited by the light that leads to heaven, or exalted by the arts that promote our ease and comfort in the present life. The savage is more quick of apprehension, more swift of foot, more acute in all his senses, more dexterous, more ingenious; in short, much better qualified to supply his own wants, procure his own enjoyments, and resist physical evils of every kind.

Nor in the blended proportion of physical and intellectual powers, does man, in this enslaved and uninstructed state, bear the same rank among his fellow-men, as animals domesticated, yet not caressed or cultivated, do among their fellow-animals. I know only one instance in which an example may be found of the wild instinct being little impaired, and a kind of borrowed intelligence superadded. This is the Highland cattle, whose wide, free range in the mountains, is calculated to cherish their native instinct; and were it not for early domestic education, would be apt to restore them to their primitive habits. But the severity of the winter,

winter, and the scarcity of provender, oblige the poor people to nurse the breeders, and even the last year's calves, with great tenderness. In this case, affection becomes grafted on interest. A poor man, who has, at most, only three milch cows and a couple of stirks, as they call the last year's calves, that they may be kept warm and well tended, keeps them under his own roof. They are placed in the further end of the house, divided from the rest by a very slight screen of sticks and clay, and often in a situation where they always are within view of their owners. A few sheep and a little horse excepted, these creatures are all their worldly wealth; and therefore the chief objects of their solicitude. Not content with almost starving themselves, to purchase food for them in years of scarcity, they caress and talk to them, in a voice so soothing, and language so endearing, and the animals seem so conscious and so grateful, and become so very much a part of the family, that it is affecting to see the mutual kindness that subsists between them. Yet it is surprising that animals so wild and lively in all their motions, should be susceptible of such lasting impressions, and retain so perfect a recollection of all their friends, after six months' absence in the mountains. When thus kindly spoken to, stroked, and caressed, they express their complacence by a peculiar

peculiar kind of breathing, that gives the idea of placid content. Nor is this the only expression of their sensibility. On meeting their old acquaintance after a long absence, they greet them with plaintive lowings. They acquire a taste for music, too, whilst dwelling in these vocal cottages, where the voice of song is so frequently heard. This rural melody certainly calms the irritation produced by heat and insects in a summer's evening, when, without it, they could not be milked with safety. This is a fact so well established, that a girl is not thought fit for a dairy-maid unless she can sing; and if it so happens, in some rare instance, that one who has no power of voice is selected for this employment, she takes another with her who can sing, to assist in milking, and to lull the fold with the wonted strains that are peculiar to this avocation; the theme of which is generally either the habits of cattle, their favourite summer haunts, or the simple adventures of those who attend them. Thus fondled, and made at one period, as it were, a part of society, and at another let loose to the boundless range of the summer pastures, they are in some degree cultivated, and retain much of the instinctive faculty, without any of the ferocity, of the wild animal of the same species. They will recognise, after a long absence, and fondly caress their

own calves, after they have become mothers of another race; and even caress the young of those, from fondness for the parent, who has been so long estranged from them. Many instances of the sagacity of these creatures are well authenticated by those who reside in the country, which, by the inhabitants of other parts, would be deemed incredible. One, however I shall mention, as having fallen under the inspection of a particular friend*, on whose veracity I can rely.

The whole country near Laggan, where my friend lived, was uninclosed. When he took possession of his farm, there was hardly a march dyke, as division fences are called there. A mere slight, ideal boundary, or, at most, marked by a range of stones, separated his fields from those of his neighbours. This gentleman had, a lead-coloured bull, who was a beautiful creature of his kind, and grazed with the cows in the open meadows. It was the constant occupation of a boy, kept for the purpose, to watch the milch cows and their guardian, lest they should trespass on his neighbour's fields, and destroy his corn. This boy was fat and drowsy, and was often found asleep on his post; an offence as

Mrs. Grant, when resident at Laggan.

unpardonable

unpardonable in a Highland herd, as in a centinel. The ploughman, provoked at the frequency of this fault, chastised the boy whenever the cattle trepassed. The boy, enraged at this, kept a long switch, and with it revenged himself, with an unsparing hand, if they exceeded their boundary. The bull seemed to have observed, with concern, this consequence of their transgression, and acted upon his observation. He had no horns, as is frequently the case with northern cattle; but then he had a hard and powerful forehead, with which he used to strike the cows, and punish them severely if any one attempted to cross the limit, or in any way trespass. In the mean time, he set them the example of perfect self-denial, never once entering the forbidden bounds, and placing himself before the cows in a threatening attitude, if they presumed to approach it. At length his honesty and vigilance became so obvious, that the boy was employed in weeding and other business, without fear of their misbehaviour in his absence. This fine animal's vigilance could only proceed from a desire to keep his companions from punishment, not from any distinction of property.

With this extraordinary account I close my letter and my correspondence; at the same time, fully

fully impressed with the expectation of very shortly enjoying the pleasure of your conversation, which will be better than a hundred letters.

Till we meet, and ever afterwards, your sincere and affectionate friend,

CAROLINE.

THE END.

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